



# BioWare™

STORIES AND SECRETS FROM 25 YEARS  
OF GAME DEVELOPMENT











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STORIES AND SECRETS FROM 25 YEARS  
OF GAME DEVELOPMENT



DARK HORSE BOOKS





## BIOWARE

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### **BIOWARE: STORIES AND SECRETS FROM 25 YEARS OF GAME DEVELOPMENT**

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# TABLE OF CONTENTS

007 FOREWORD

## PART 1 DOCTORS EXPLORE FORGOTTEN REALMS

008 BIOWARE: ORIGINS

016 SHATTERED STEEL

024 BALDUR'S GATE

038 MDK2

## PART 2 PRAIRIE UPSTART BECOMES INDUSTRY LEGEND

056 BALDUR'S GATE II: SHADOWS OF AMN

068 NEVERWINTER NIGHTS

080 STAR WARS: KNIGHTS OF THE OLD REPUBLIC

098 JADE EMPIRE

114 SONIC CHRONICLES: THE DARK BROTHERHOOD

124 REVOLVER

## PART 3 FROM AMBITION TO REALITY

138 MASS EFFECT

160 AGENT

170 BIOWARE LABS

178 MASS EFFECT 2

192 DRAGON AGE: ORIGINS

210 DRAGON AGE II

## PART 4 EXPLORING THEDAS, THE MILKY WAY, AND FAR BEYOND

232 STAR WARS: THE OLD REPUBLIC

244 MASS EFFECT 3

262 DRAGON AGE: INQUISITION

284 SHADOW REALMS

292 MASS EFFECT: ANDROMEDA

304 ANTHEM

321 THE FUTURE OF BIOWARE

328 ABOUT THE AUTHOR









# FOREWORD

CASEY HUDSON

**AS A KID I WAS FASCINATED BY** books like *The Art of Star Wars*, as they seemed to offer secret insights into the grand magic trick of bringing entire fictional worlds to life. I pored through every page, studying production paintings, marker renders, and pencil sketches—knowing that these artworks were the beginnings of what would become fully realized universes for millions of people around the world. Those books inspired me to create my own art, but more importantly they opened my eyes to the idea that there were real people out there, with real jobs, responsible for imagining new worlds—and that maybe someday I could have a job like that.

I was incredibly fortunate to be hired by BioWare in the early days, and over the years we have made a number of art books for our own games. But even though they include early concept art and explorations of various creative ideas, you're still seeing a somewhat polished end product: art that ultimately became part of a major video game. It creates the impression that video game development is a linear process: earnest, professional, methodical, and done by people who know exactly what they're doing. But that's not the full story.

The real power of the video game medium is that it's constantly evolving. Video games combine traditional arts with technology innovations to create something just a little bit beyond anything you have experienced before. That combination of art and technology innovation creates a very challenging creative space where art, design, and technology must come together to create a cohesive experience. In other words, the process of making games is messy. It involves starts and stops, creative explorations into things that don't work out, great

ideas that can't be used, features that get cut, and entire projects full of passion and promise that never see the light of day. The result is that much of the work that a game development company does will never be seen outside the walls of the studio.

This of course is a bit of a tragedy, as I believe the best way to honor someone's hard work is to make sure it gets seen. Normally this means ensuring the game they're working on actually gets made, which is a tall feat in itself and sometimes doesn't happen. And often while working on the early stages of a game I would look through the art folders on our network drives to find inspiring images, and I'd come across countless concepts and paintings that I knew no one would ever see. That gave rise to the idea of a different kind of book—one that included ideas and concepts for things that didn't work out and revealed more of the messy process of making games.

So this is not just an art book or a "making of" book. It's also not a hard-hitting exposé, or an exhaustive history of the studio. It's a scrapbook of sorts. A collection of art, anecdotes, secrets, and experiences from twenty-five years of game development at BioWare—pulling back the curtain on the making of games millions of people have played, and ones that were canceled before they were even announced.

This is the story of BioWare, and the sometimes strange and silly paths we've taken from humble beginnings to industry-scale expectations. I hope that fans of our games, other game developers, and aspiring game makers might find some inspiration from this book—or at least enjoy an inside look at what the heck we've been up to all these years.



# BIOWARE: ORIGINS

WITH A BOUT OF SUCCESSFUL STOMACH  
SOFTWARE, BIOWARE FORMS OVER LUNCH

"IT WAS VERY FEW PEOPLE, EACH ONE CARRYING A  
HUGE AMOUNT OF RESPONSIBILITY. IT WAS A WHOLE  
LOT OF STRESS AND A WHOLE LOT OF HOURS. FAIL  
AND WE'D HAVE TO GET REAL JOBS, AND REAL JOBS  
SEEMED TO SUCK."

—TRENT OSTER, WHO BROUGHT *SHATTERED STEEL*  
TO BIOWARE BY WAY OF LLOYDMINSTER







BioWare assembled groups of eager, inexperienced developers from all corners of Alberta, growing quickly from its three founders to a studio of dozens in just a couple of years.

**THE STORY GOES LIKE THIS.** Three med students in the freezing wilds of Edmonton, Alberta, meet in the late eighties and bond over foosball, amateur coding, and a love of video games.

They split up for a while, doing practicums and placements at hospitals across Canada like young doctors do, before returning to Edmonton with an idea: the medical training software they used when they were in med school sucked. Why not try to do better?

So these doctors made a couple of patient simulators: one for acid-base physiology intended for med students and a second focused on gastroenterology that was distributed to family doctors across Canada by way of Janssen-Ortho Pharmaceuticals. The doctors' approach to medical software included gamified elements and honest-to-god graphics, making it more accessible and even a little fun to use.

But now these doctors—Ray Muzyka, Greg Zeschuk, and Augustine “Aug” Yip—had a problem. They liked making software. Especially the parts that felt like games.

So they got lunch.

“Literally, BioWare formed over lunch,” Ray says. “This medical education thing, there wasn’t a lot of money for it. It was tough to sell the products we made. So we were like, why don’t we just make video games?”

He remembers thinking how cool it would be to make games when he was a kid. “But I never really pursued it seriously. It didn’t seem feasible.”

“It didn’t seem like a real option for two kids from Edmonton,” Greg says.

They decided, what the hell, why not try it? They’d keep their licenses to practice while also

taking the leap headlong into game development. With significant investments from each founder, BioWare began as a studio of three. Then four. Then complements of fledgling devs from Grande Prairie and Lloydminster joined and made twelve. The studio started developing games. And shipping games. They moved into increasingly larger spaces. Aug returned to medicine, while Greg and eventually even Ray gave up their practices to focus on BioWare full time.

Over the years since, BioWare has crafted some of the best games in the *Star Wars* and D&D universes, created multiple universes of their very own in series like *Dragon Age* and *Mass Effect*, and made mechanics like player choice damn near ubiquitous in games.

This is the story of a little game company from a city only hockey fans had ever heard of that grew to hundreds of employees in multiple studios and created some of the greatest stories ever played.

**“THE ENTIRE COMPANY WAS SELF-TAUGHT OR CAME RIGHT OUT OF SCHOOL. THAT ACTUALLY WAS AN EDGE.”**

—STEVE GILMOUR, WHO JOINED THE COMPANY IN ITS SECOND YEAR





## ADVENTURE GAMES FOR STOMACH DOCTORS

### THE MAKING OF ACID-BASE SIMULATOR AND GASTROENTEROLOGY PATIENT SIMULATOR

THE GENESIS OF BIOWARE was in medical software that doctors Ray Muzyka, Greg Zeschuk, and Augustine Yip created when all three were still practicing medicine.

"We were going to med school in the late eighties," Greg says. "We'd played a ton of games and actually made stuff ourselves."

"We were sort of self-taught programmers," Ray says. "I was never very good. Just good enough to understand the logic of how it was done."

The doctors were not at all impressed with the quality of the software available to students and found themselves comparing it to video games they were playing at the time. Very little effort seemed to have been put into the user experience. The interfaces were bad. The software was slow and difficult to use. It often lacked any kind of graphics, instead defaulting exclusively to text.

"They're like: 'You see a patient.' Well, show me a picture of the patient!" Greg says. "And we're like: 'This is shit! We can make stuff better than this.' And then we did."

The doctors' first piece of software was Acid-Base Simulator. They hard coded it using C/C++. Aug did the art. Then came a second piece of software, the aptly named Gastroenterology Patient Simulator, this time written with Authorware.

The doctors' software actually showed patients on the screen. They gave players clues and tasked them with diagnosing an array of issues.

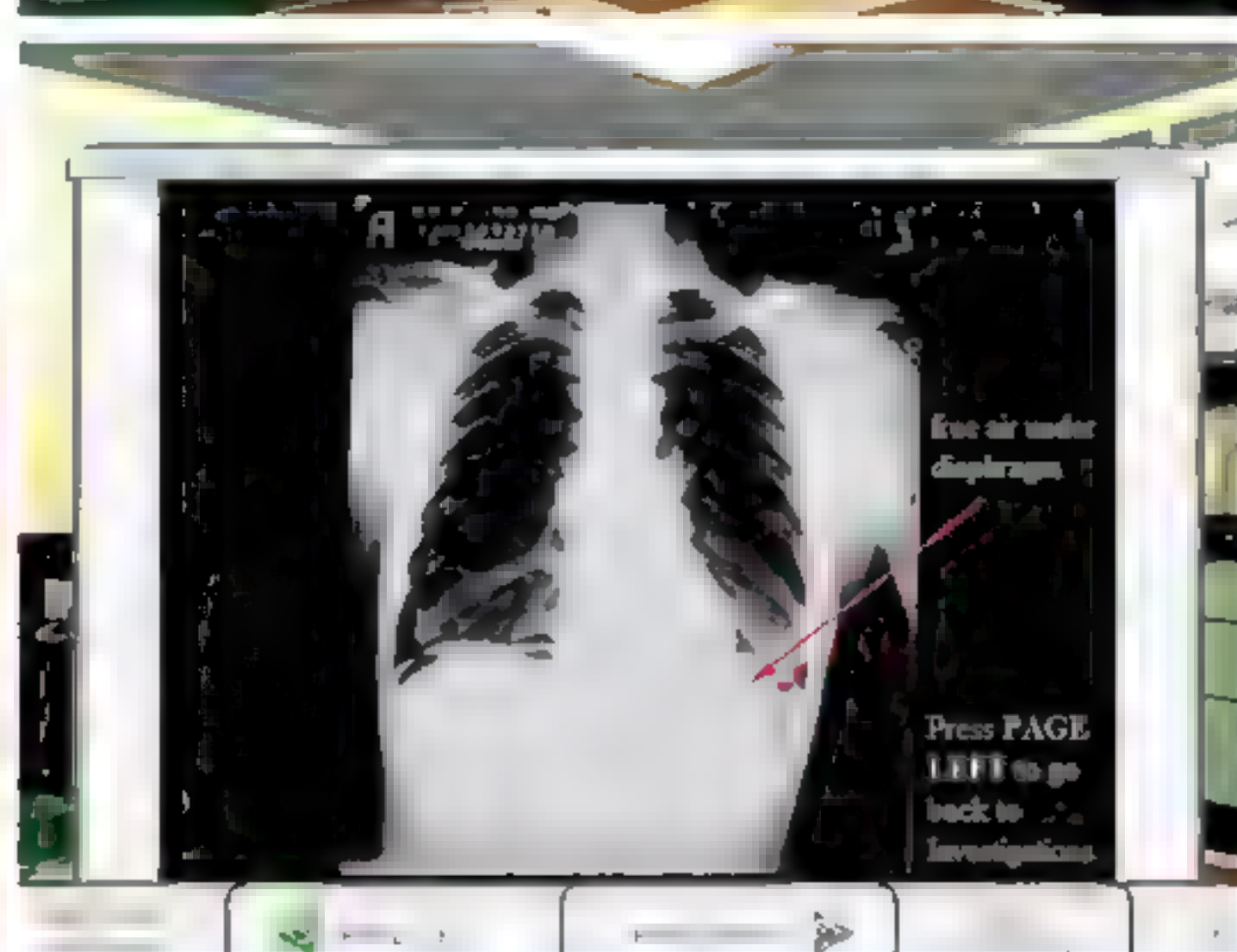
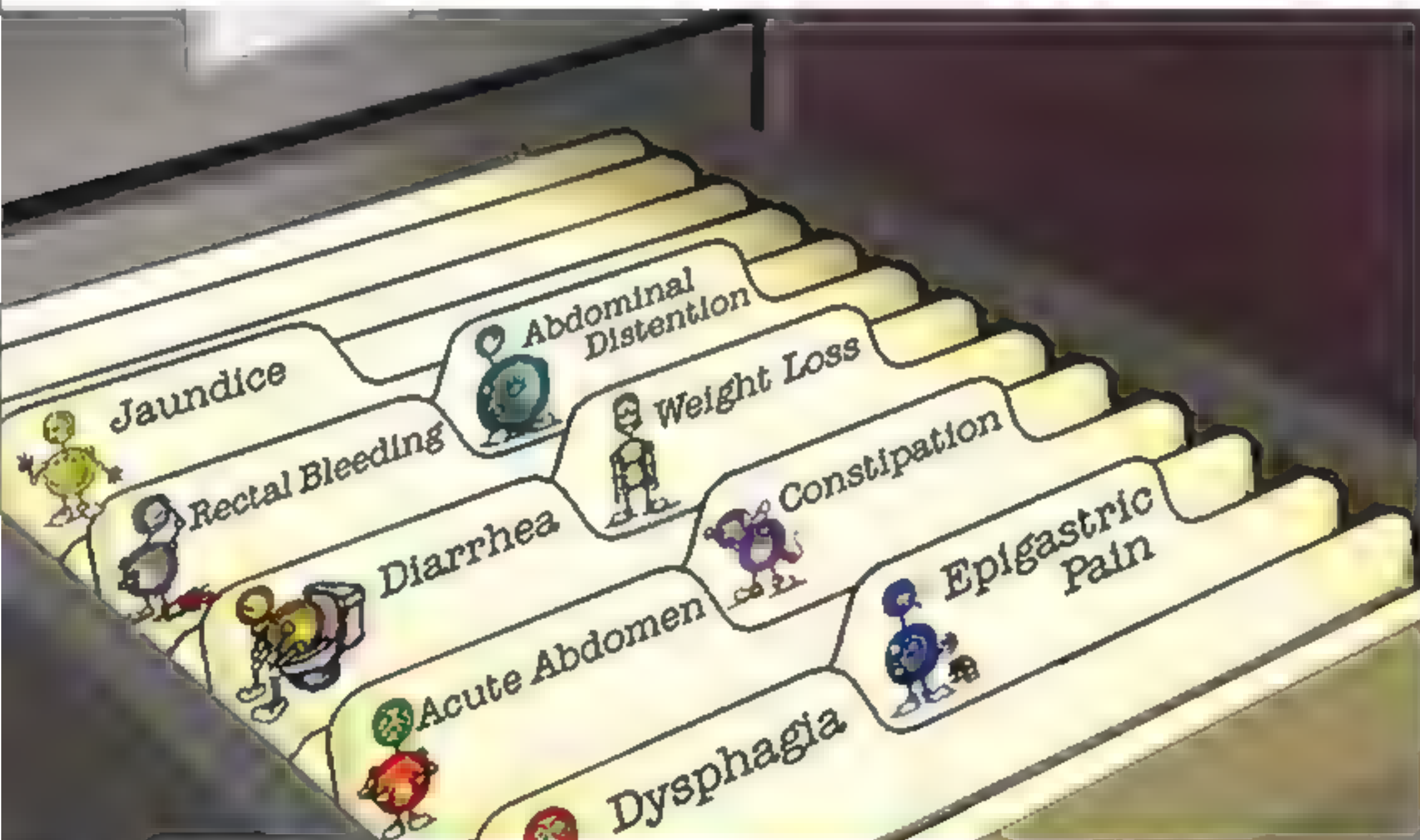
"It was like: here's their x-ray, what do you think?" Greg says. "What's hilarious in retrospect is that it was kind of like an adventure game for stomach doctors."

The focus was on giving players clues to help them figure out what was wrong with each patient.

Players would have to make choices in order to accurately diagnose patients in the games.

"Choose A, B, C, or D, like a make your own adventure book," Ray says. "You had to solve the puzzle, which is really medicine in a way."

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#### Objectives

1. List and Classify causes of weight loss.
2. Describe symptoms or signs to suggest that a patient suffers from maldigestion or malabsorption, including those of nutrient deficiency.
3. List and classify causes of a) maldigestion and b) malabsorption.
4. Outline the normal physiology of absorption of dietary fats, protein, carbohydrates, iron, calcium, water-soluble vitamins, vitamin b12 fat-soluble vitamins.
5. Outline the normal physiology of exocrine pancreatic secretions.
6. Describe the clinical features and complications of chronic pancreatitis/pancreatic insufficiency.
7. Describe the clinical presentations of pancreatic adenocarcinoma.
8. Outline the appropriate investigation of a patient with suspected a) malabsorption and b) pancreatic insufficiency.
9. Outline the management of pancreatic insufficiency.

#### Patient Profile

**Name:** Sze Rajesh Lee  
**DOB:** Sept 23, 1962  
**Gender:** male, single  
**Meds:** OTC antilflat's  
**Allergies:** nil



#### Chief Complaint:

This "pharmacist" comes complaining of a 12kg. weight loss over the past 8 months.

Click here to  
 proceed to  
 Exam Room





Jim Ray, Mike and Greg Zesch  
 standing in front of the Eiffel Tower in Paris.  
 After they worked as a product  
 manager at EA, they joined Bioware  
 and were eventually promoted to  
 the industry's top jobs.





## WORKING THE NIGHT SHIFT

THE FOUNDERS OF BIOWARE BURNED THE CANDLE AT BOTH ENDS

Dr. Ray Muzyka, who left the game industry to become a doctor, and Greg Zeschuk, who left the game industry to become a doctor, are the founders of BioWare.



### BIO-TRIVIA

HALF OF BIOWARE'S  
INITIAL DEVELOPMENT  
TEAM NEARLY DIED

Employees at BioWare were told to work at BioWare until they were driving. When they were driving, they were told to drive to work. When they were driving to work, they were told to drive to work. When they were driving to work, they were told to drive to work.

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**DRS. RAY MUZYKA AND GREG ZESCHUK** continued to practice medicine for years after founding BioWare.

For Greg, the realization that he could make games full time without pulling double duty as a doctor came in 1999.

He was lying in bed at the Glenrose Rehabilitation Hospital in Edmonton, working the overnight shift in geriatrics. "I'd work during the day at BioWare and do overnight calls," Greg says. "They paid me to sleep. But then sometimes I didn't sleep and that was bad, going to work the next morning."

This was more than a year after the release of *Baldur's Gate*.

"I was lying there going: 'You know, I don't think I have to do this anymore,'" Greg remembers thinking. "I think this *Baldur's Gate* thing is good enough."

"When did we start taking salaries?" Ray asks him.

"I think it was around then," Greg says.

By the turn of the century, BioWare had secured multiple publishing agreements and had a handful of promising games in development, including *MDK2* and *Baldur's Gate II: Shadows of Amn*. Things were looking up.

Still, Ray continued to work as an emergency room doctor well into the aughts, albeit it on an increasingly casual basis. "I did weekends typically. Once a month, or once every two or three months, I'd go and do an ER shift," he says. "My hobby became my career and my career became a hobby."

Not that those weekends in the emergency room were easy. Ray most often worked as a rural ER doctor, driving out to smaller Alberta towns like Valleyview and Redwater. Places where, for that weekend, he was the only doctor who could handle a trauma.

On some weekends, Ray would go forty-eight hours with zero sleep. In those early years, the doctors also worked during their holiday "breaks." While the rest of the studio had paid time off, Ray and Greg were treating patients.

"Because we weren't taking salary, I'd be like: 'I gotta work because I'm technically bankrupt at the end of the month if I don't work,'" Ray says.

Like Greg, he did eventually stop, around the time he got married in 2002—though Ray still keeps his medical license in his wallet and only let it expire in 2018.

"My wife-to-be said: 'You're doing your MBA, you're working like one hundred hours a week, some weeks at BioWare, and you're still doing this medical stuff?'" Ray recalls.

"You need to sleep sometimes," Greg says.

Ray's wife gave him an ultimatum. She told him that something had to go. "I remember she said: 'If something doesn't go it's going to be me,'" and I'm like: 'All right, I'm quitting medicine.'"

After retiring from practice, Ray and Greg were careful not to be the studio doctors. If someone was sick enough, they'd refer them to practicing medical professionals. But that didn't mean their training in medicine was useless in the office.

"It actually translated in other ways," Ray says. "As a doctor, you learn how to communicate better with people. You learn the importance of teams. Working in the ER, I learned the importance of a multidisciplinary team and how you have to make sure everyone's skills are valued and respected."





"MY HOBBY BECAME MY CAREER AND MY CAREER BECAME A HOBBY."

—RAY WILSON,  
BIOWARE COFOUNDER

...you start by creating a...  
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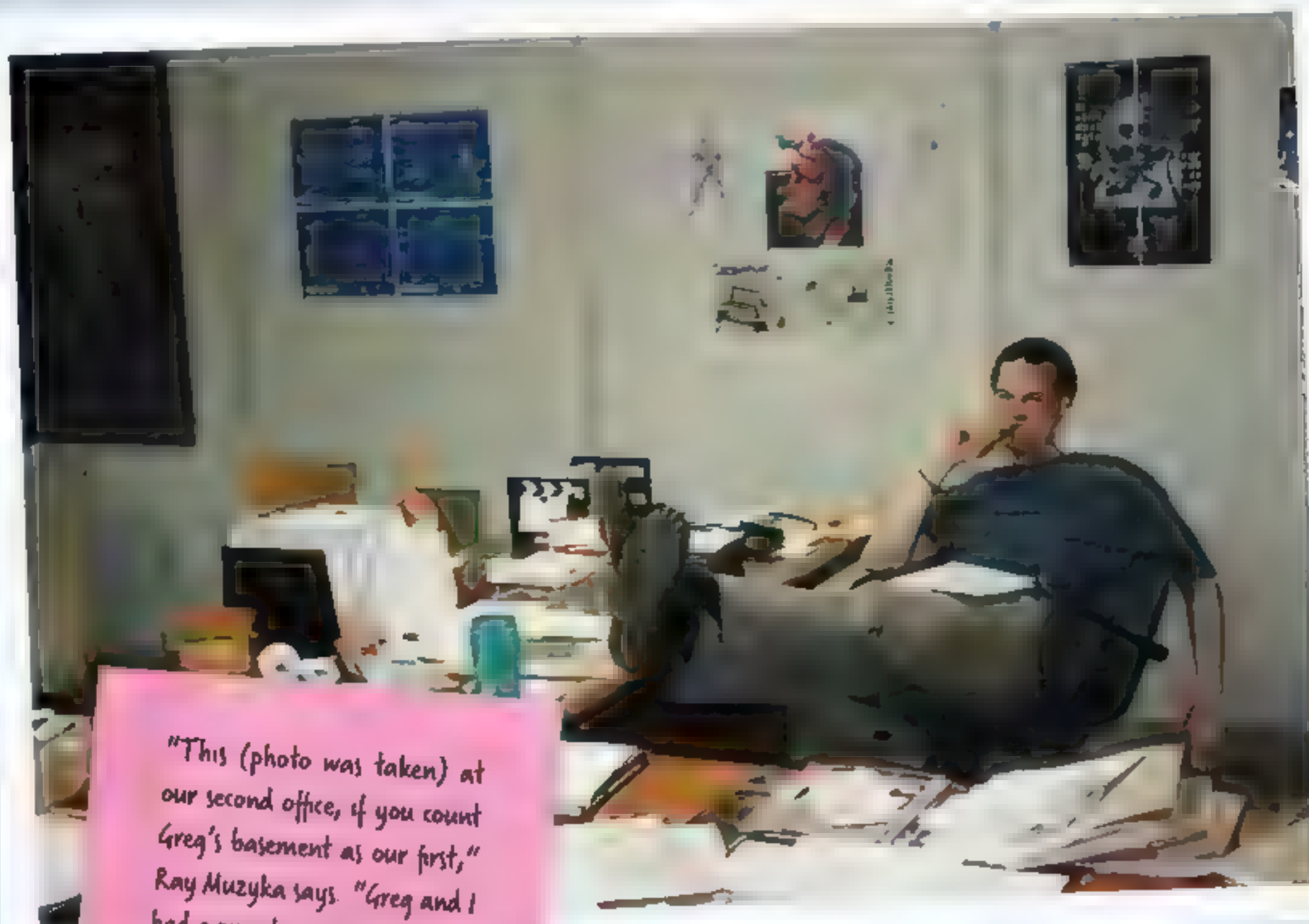
## BIOWARE'S FIRST HEADQUARTERS WAS IN GREG ZESCHUK'S BASEMENT

BEFORE BIOWARE CORP. was an international game development company with multiple studios and hundreds of employees, it was just founders Ray Muzyka, Greg Zeschuk, and Augustine Yip, working with Scott Greig, BioWare's first director of programming and lead programmer on *Baldur's Gate*, in the basement of Greg's house.

"It was one of those really old houses, so the ceiling was, like, below six feet," Ray says. "I would stand up and because I'm six foot five, I actually knocked myself out one time."

"My hair would hit it," Greg says.

While a lot of BioWare's basement studio history was eaten up playing LAN games like *Dune* and *Warcraft*, the four friends also found time to work on their medical software and an ambitious new game they were calling *Battleground: Infinity* that would become *Baldur's Gate*.



"This (photo was taken) at our second office, if you count Greg's basement as our first," Ray Muzyka says. "Greg and I had a private room upstairs for phone calls and conversations. This was my desk."

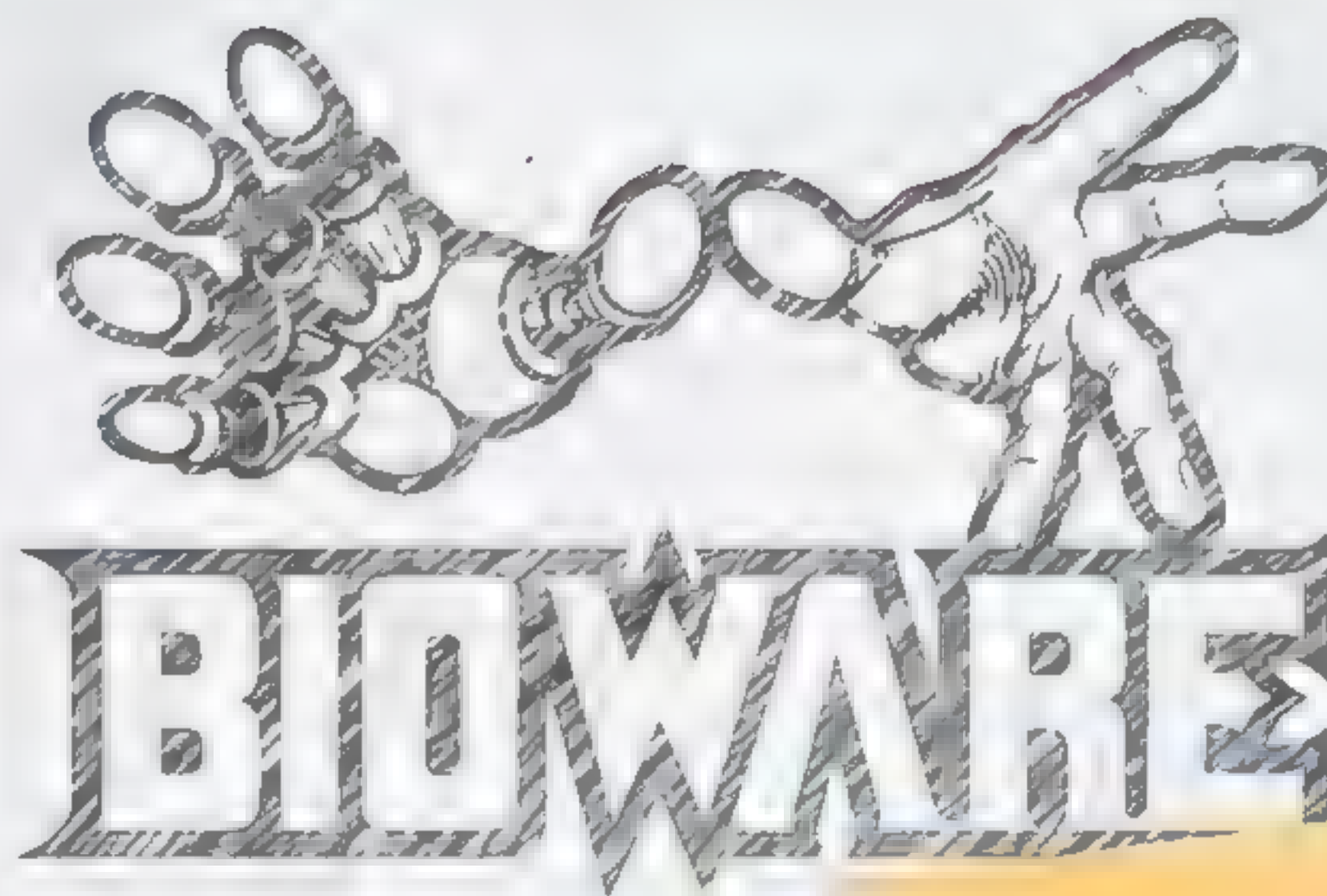
## WHAT'S IN A NAME?

### WHY BIOWARE IS CALLED BIOWARE

CONTRARY TO POPULAR OPINION, the founding doctors of BioWare didn't come up with the company's name because they were making medical software. They already knew they wanted to make games for the general public when the name stuck.

"It was sort of a play on words," Ray Muzyka says. "We thought it was kind of a tongue-in-cheek reference to the founders being medical doctors."

The idea of the human-machine interface was also part of the rationale behind the name, leading to the company's first official logo, which depicted one robotic and one humanoid hand, reaching out to the user.



BUG REPORT:  
**BioWare not Bioware**

**Release:** N/A

**Priority:** 4 (Polish)

**Description:** "BioWare" is the correct spelling of the company and never "Bioware" with a lowercase w. The latter is actually a Finnish line of renewable paper cups.

Industry heavyweights scoffed at the name BioWare. "They told us that with the name BioWare, 'You're never going to be a brand in the industry,'" Ray Muzyka says.

**BiOWARE**  
A DIVISION OF EA

**BioWare™**







BioWare and Pyrotek developers, including Ray Muzyka and Greg Zeschuk (center) and Trent Oster (far right) at Pyrotek's office.



## BLASTEROIDS 3D AND THE LLOYDMINSTER CONNECTION

THE *ASTEROIDS* CLONE THAT LED TO  
*SHATTERED STEEL*

**BEFORE THERE WAS BIOWARE**, Trent Oster and a small team of friends, including his brother Brent and Greg Zeschuk's cousin Marcel, gave themselves the summer of 1994 to make a game in their hometown of Lloydminster, a small city on the border between Alberta and Saskatchewan.

"The deal was, if we finished a prototype by the end of summer and we had a game, we were going to go for it," Trent says. "We were going to become professional game developers."

The prototype they ended up making was *Blasteroids 3D*: a first-person *Asteroids* clone released via shareware for DOS in 1994. It was pretty raw, even as far as prototypes go. The UI was drawn in Corel Photo-Paint. But it was playable.

While they were working, Greg would visit. He was doing a locum over that same summer in the nearby town of Vermilion.

"This is really cool," Trent remembers Greg saying about home-based video game development. "I got some other guys and I want to do something like this."

Those other guys were Drs. Ray Muzyka and Augustine Yip. Trent and his team moved to Calgary after completing *Blasteroids*, now convinced they had what it took to make video games. They went to work creating a new title as Pyrotek Game Studios. This game was far more ambitious: a mech shooter they called *Metal Hive*.

When BioWare formed, they initially worked with Pyrotek, and later brought Trent to Edmonton, who in turn brought a mostly finished *Metal Hive*. The project evolved into *Shattered Steel*, the first video game released under the BioWare name.





## BIOWARE'S MECH DEBUT



### KEY FACTS SHATTERED STEEL

**RELEASE DATE:**

September 30, 1996

**GENRE:**

Mech sim/shooter

**PLATFORMS:**

Windows, Mac OS

Developed in Edmonton

Published by Interplay  
Entertainment

**BIOWARE'S FIRST GAME** was strung together on playing-card-castle code and a handful of voxels.

The first-person mech simulator called *Shattered Steel* was entirely hard coded, making every bug an ordeal to fix. Memory constraints meant only 256 bullets could be rendered across the entire game space. When number 257 was fired, it replaced the first bullet, which disappeared. In a multiplayer game that supported up to sixteen players, this wasn't really enough bullets.

The game dropped at the worst possible time too: in the fall of 1996, the same window as a major expansion to *MechWarrior 2*, its chief competitor in the genre.

While *Shattered Steel* boasted thirty-two missions, co-op play, death matches, and literally ground-breaking elements like destructible terrain, the game only sold a modest number of units.

But it did exist. Players could buy it. And play it. In an industry as raw and wild as PC game development in the nineties, that was enough.

#### SHATTERED STEEL ORIGINALLY WASN'T A BIOWARE GAME

The project began as *Metal Hive*, an idea born out of a fledgling studio called Pyrotek staffed by brothers Trent and Brent Oster along with Greg Zeschuk's cousin Marcel. The three Lloydminster kids had just spent the summer hammering out a shareware *Asteroids* clone called *Blasteroids 3D* and were riding that momentum in service of a much more ambitious mech sim.

"The idea was the enemies had a queen and were kind of this metallic flesh hybrid," Trent says of *Shattered Steel*'s original name. There wasn't much more to the story at that point. The small team's focus was on building the game and making it playable. Eventually Pyrotek put together a single-player demo, with the help of new eyes like John Winski, and enlisted the help of BioWare to pitch the game to potential publishers.

In the midst of all this, Pyrotek moved to Calgary, brought on still more new devs, including artist Mike Sass, struggled to find funding, and was forced to fold.

Trent moved north to Edmonton with *Shattered Steel* in tow, joining BioWare on one condition: they vacate the Garneau location in favor of some place better suited for game development. The doctors obliged and they got to work, dividing their time between mechs and the *Battleground: Infinity* project that would become *Baldur's Gate*.

#### POLISHING SHATTERED STEEL

*Shattered Steel* boasted single and multiplayer combat with multiple mechs and an arsenal of weapons, including lasers, missiles, plasma guns, and even nukes.

Greg took on the role of producer, working with Trent and a small dev team that included John and Mike to finish the game, while Ray, along with newly hired *Baldur's Gate* lead designer James Ohlen, hammered out a story with others on the team to give the action more context.

"You wrote it, like, two days before we shipped,"





Greg says to Ray. Interplay had recorded a bit of sound. But there wasn't much tying things together. "They made these audio cues to start each mission," Greg says. "And then these guys were like, well, we gotta make a story to make these make sense."

They came up with a postapocalyptic setting where everything was run by rival megacorporations. The story they wrote appeared entirely in text, both in game and in supplementary materials. But writing even the most functional setting, ensuring it matched what was there, gave the game context. "That was part of the genesis of why we thought story was so important," Ray says.

#### PITCHING TO PUBLISHERS

When it came time to pitch a demo of *Shattered Steel* to publishers, Ray and Greg singled out ten they thought might be interested.

"We divided the list and just cold-called people," Ray says. "Most of the publishers aren't even in existence anymore."

"EA snubbed us," Greg says. "They never made an offer."

The rep at Interplay was also ignoring the demo. It was just sitting on a pile, Greg says. "But he kinda got fed up with us bugging him."

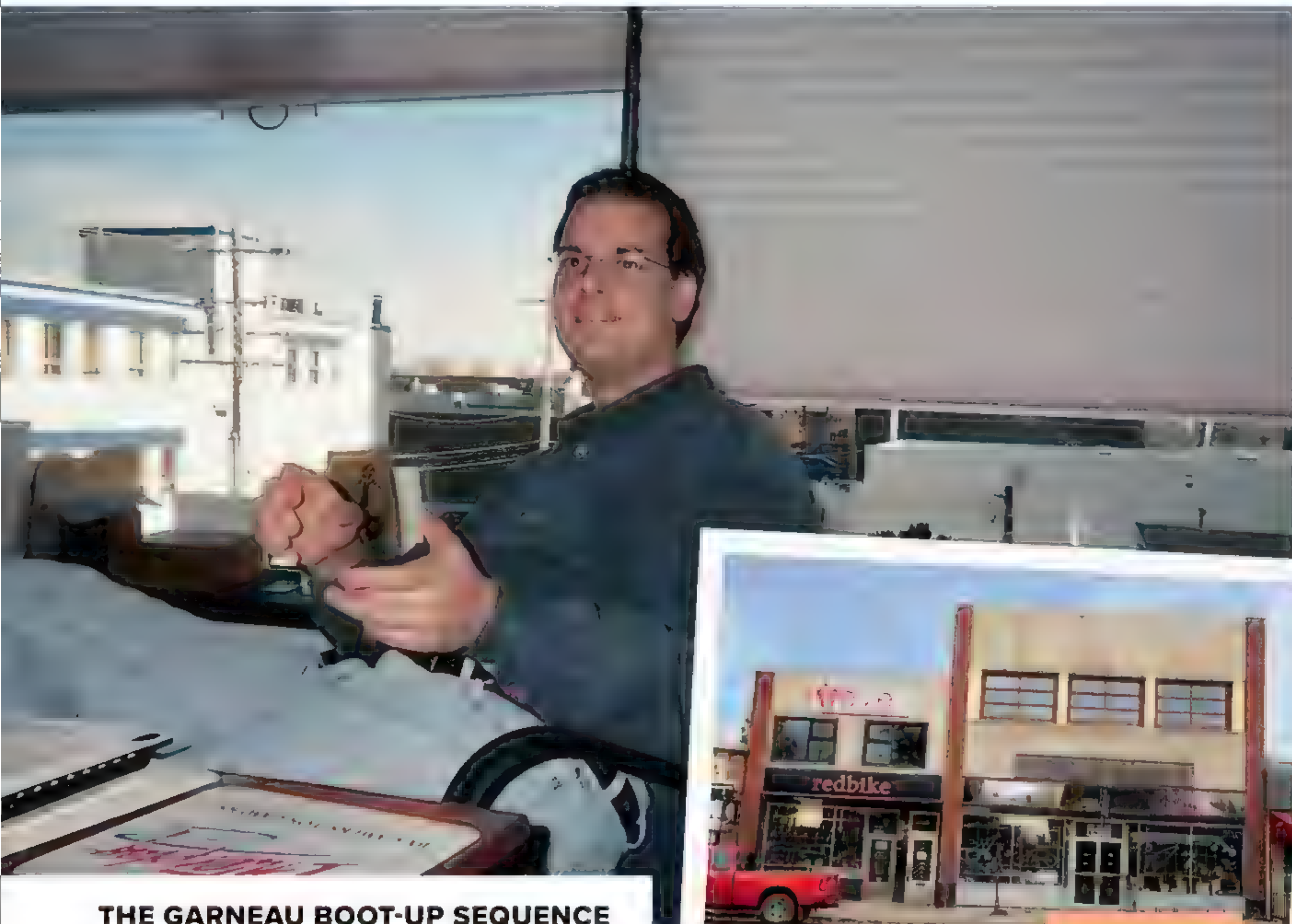
"He was just like: 'Can you stop calling me?'" Ray says. "And I'm like: 'Well look at the demo already.' And then the next day, basically, they're like: 'Hey, we looked at that package you sent. We tried the demo. Do you guys want to fly down here? Maybe next week?' And you know, they made us an offer."



In the months leading up to *Shattered Steel*'s release, the *Edmonton Journal* newspaper interviewed the doctors about the game and their ambitions for the studio. The article described *Shattered Steel* in that belabored way some newspapers still tend to describe video games, branding it "a full-motion video space adventure of startling realism."

The article went on. "Now, with the action game not even released, BioWare has a contract to produce several more," Charles Mandel wrote in the *Edmonton Journal*. "One, Zeschuk nervously refers to only as an electronic version of 'a fantasy role playing game.' Suffice to say, BioWare artists were busy creating animations based on the game books for *Dungeons & Dragons*."





## THE GARNEAU BOOT-UP SEQUENCE

GROWING TEAM TURNED ON THEIR COMPUTERS IN SEQUENCE EACH MORNING TO AVOID AN OUTAGE

**AFTER MOVING OUT OF** Greg Zeschuk's basement—the original home of BioWare when it was just the founders and programmer Scott Greig—the doctors found a tiny office above a bicycle shop in a quaint university neighborhood called Garneau, just south of Edmonton's river valley.

As 1995 turned into 1996, the staff grew from four to twenty, packing into the creaky second floor of a walkup building that absolutely could not handle more than a dozen computers running at once—at least not without some creative power management.

Enter what the doctors call the “boot-up sequence.” In all, this office had four breakers. Each could only handle a certain number of computers before it blew. Knowing this, every morning the staff at BioWare would systematically take turns booting up their stations, calling out as they took their turn.

“So you don’t overload the wattage of them, you would turn everybody’s computer on in a certain order,” Ray Muzyka says. “We had to do this by trial and error to figure out, like, you know, how do you get twenty computers to go into an office that’s probably meant for, like, six or something.”

When one breaker neared its limit, or they felt that breaker was nearing its limit (this wasn’t an exact science), the team began booting up computers connected to the next breaker.

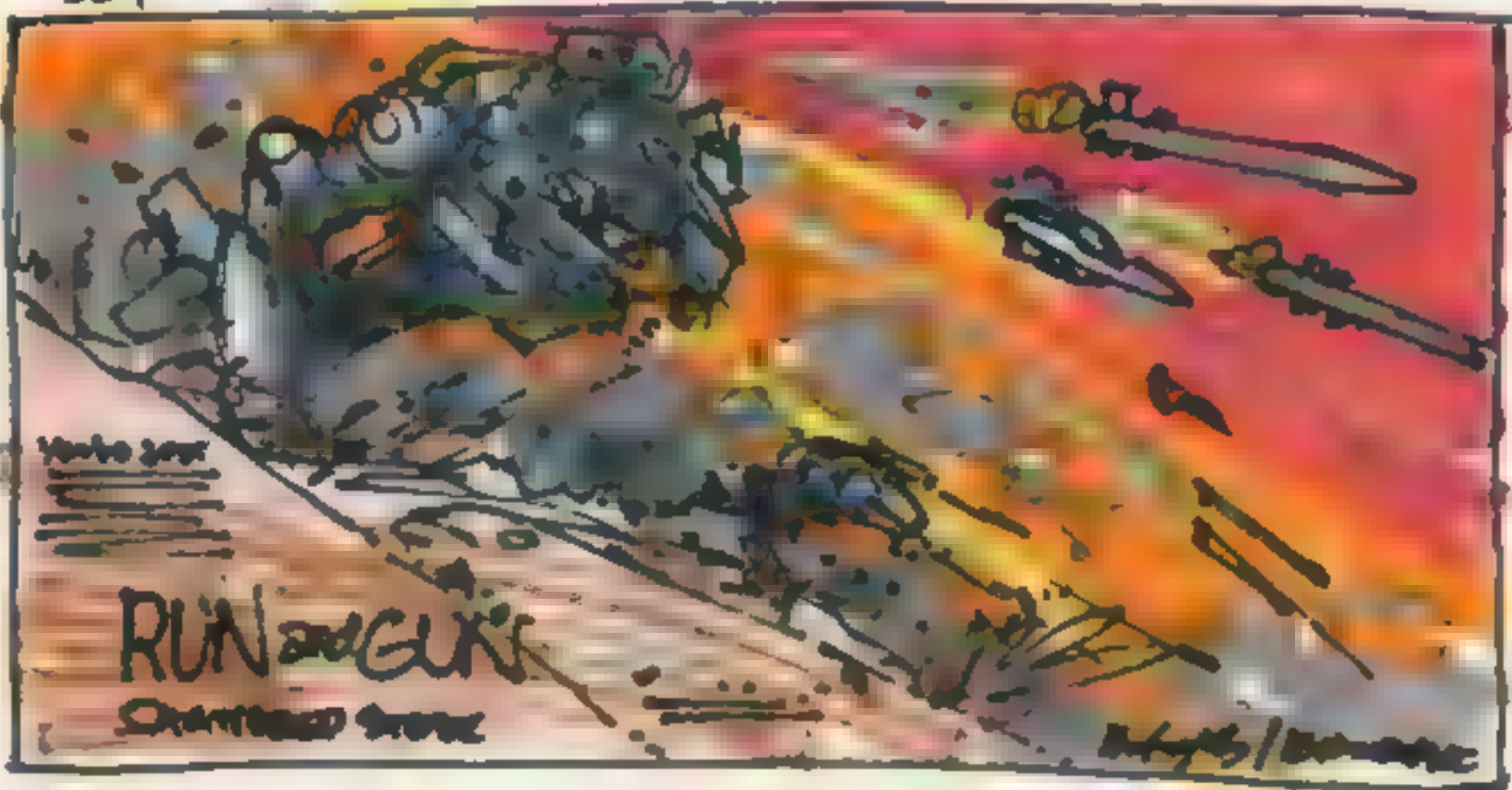


BioWare's Garneau office was above a bicycle shop.





SS4



In the early years of BioWare, marketing and concept art like these colorful Shattered Steel pieces were hand drawn on paper by in-house artists like Mike Sass and John Gallagher. Other credited artists for the game included developers not typically known for their art like Greg Zeschuk to Trent Oster.

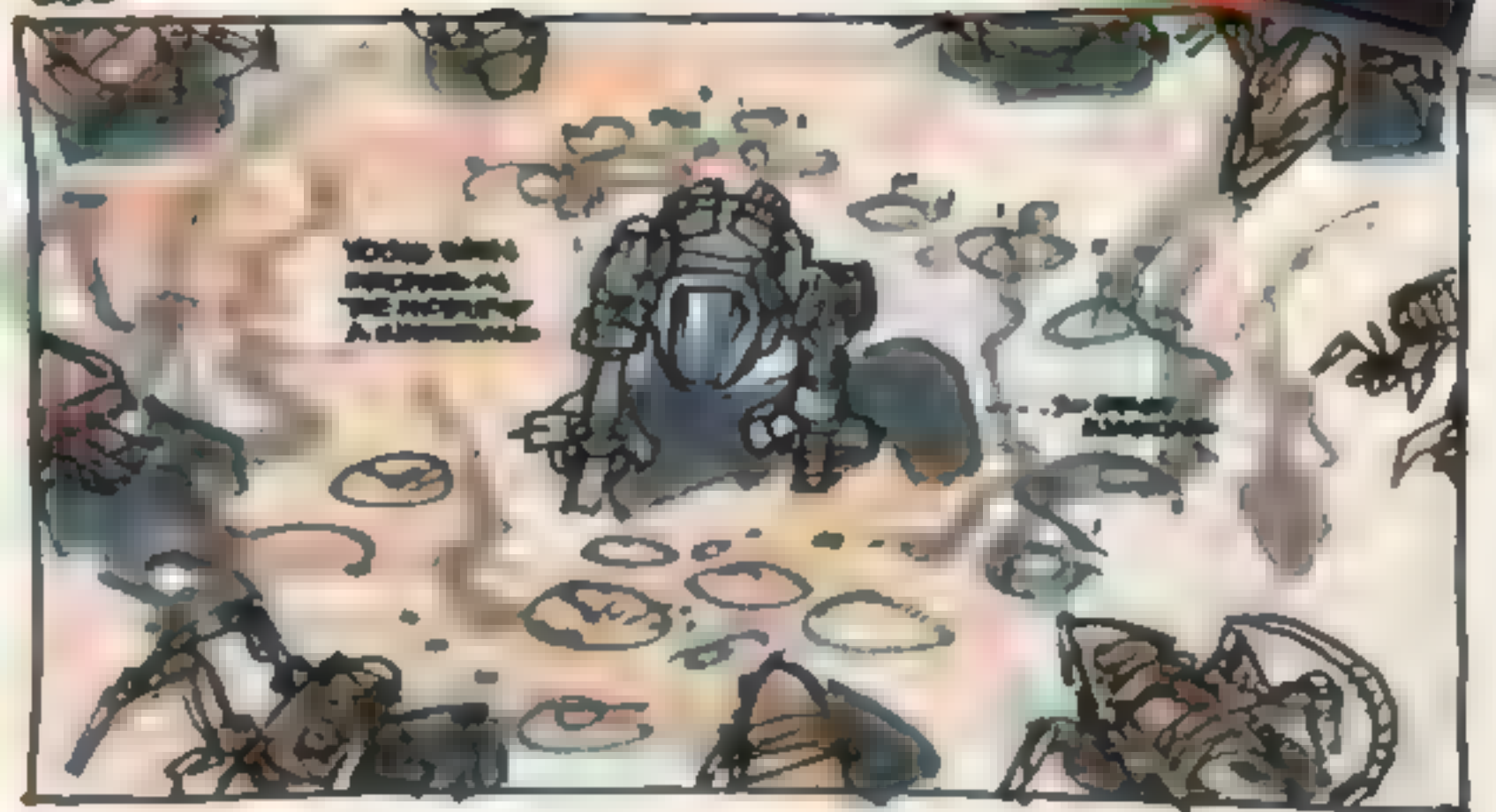
SS1



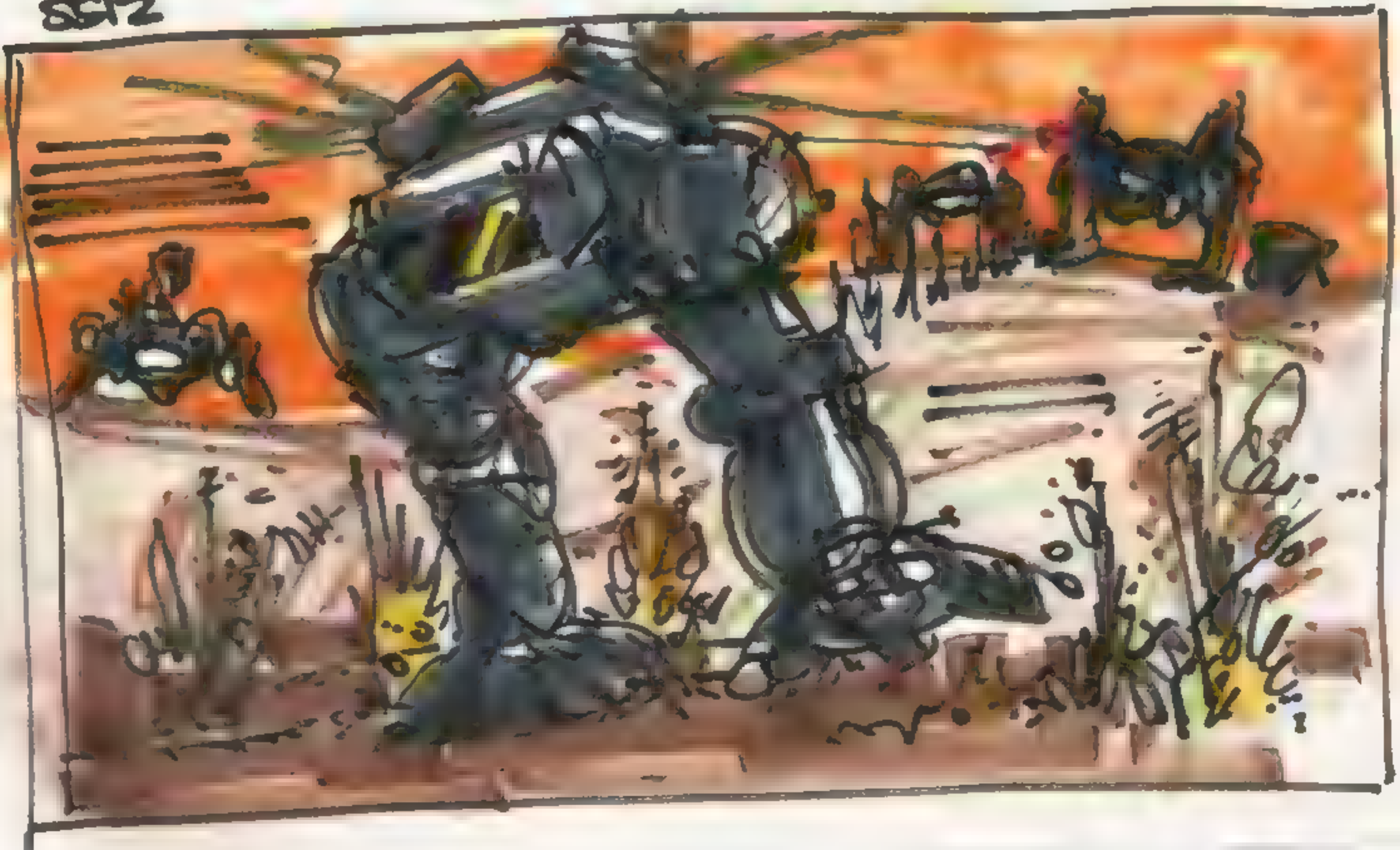
SS10



SS3



SS12







John Shaver assesses the game's visual space, once it has rendered the graphics correctly when running on the highest, the ultra-high.







## FRUIT FLY INFESTATION

**PROBLEMS AT BIOWARE'S** Garneau location didn't end at iffy wiring. One Saturday, Ray Muzyka came in to find a bowl of soup by the front door. He noticed it because it looked like someone had put a lot of pepper in it. Like, way too much pepper.

"And I lean down and it's completely covered in fruit flies," Ray says. Fruit flies became a constant nuisance in the office. It took some detective work, but Ray figured out why. Their lead programmer liked pop. Sugar liquid. "He would leave these half-drunk Coke cans everywhere. All over the office," Ray says. "So, of course, the fruit flies loved this."

They made him switch to bottles with screw tops.













## THE MAKING OF

# Baldur's Gate™

### BIOWARE'S FIRST BIG CAMPAIGN BEGAN AT THE KITCHEN TABLE



#### KEY FACTS BALDUR'S GATE

**RELEASE DATE:**

December 21, 1998

**GENRE:**

RPG

**PLATFORMS:**

Windows, Mac OS

**EXPANSION CONTENT:**

*Tales of the Sword Coast*

Developed in Edmonton

Published by Black Isle

Studios (division of Interplay  
Entertainment)

BEFORE *BALDUR'S GATE* came along in the late nineties, a lot of people were saying RPGs were dead.

Those people weren't working at BioWare.

Inspired by *Dungeons & Dragons*, *Wizardry*, and other favorites, Ray Muzyka and Greg Zeschuk had long been working on their own original fantasy RPG—one that would bring the experience of a tabletop campaign to a computer screen.

When it came time to pitch their idea for an isometric CRPG, titled *Battleground: Infinity*, they first sent a demo to Interplay, who were happy with BioWare's work on *Shattered Steel*. But Interplay had their own plans for the role-playing genre. Armed with the *Dungeons & Dragons* license, the Los Angeles publisher had already released a real-time strategy game set in the D&D universe called *Blood & Magic* and were readying a first-person dungeon crawler in the *Forgotten Realms* setting called *Descent to Undermountain*.

"They said, 'Yeah, we're not interested in anything. We got our own stuff,'" Greg recalls. "And then they heard we're going to Virgin Interactive, which was across the street, showing it to them and they're like, 'Well, since you're down . . .'"

"It was Feargus Urquhart," Ray says. "He heard that and he was like: 'Wait, wait, they're taking a meeting with you with all their executives?'"

"Guys flew in from Europe for it," Greg says.

"And then he finally looked at the demo that we had sent again," Ray says, "and he realized, 'Hey, actually this is pretty cutting edge.'"

#### A CAMPAIGN TESTED ON THE TABLETOP

And lo, the foundation that was *Battleground: Infinity* became an officially licensed *Dungeons & Dragons* game. Like *Descent to Undermountain*, it used the *Forgotten Realms* setting. And it was going to be huge. Maybe. The sliding bitmaps were neat, at least.

Around this time, as *Shattered Steel* was still in development, James Ohlen and the rest of the Grande Prairie crew were hired on to work on *Baldur's Gate*, effectively doubling the size of BioWare's team. James was BioWare's first credited

designer, though his job was more accurately described as doing "everything Ray needed done."

James and other early BioWare devs from Grande Prairie contributed now legendary characters like Minsc, Shar-Teel, Edwin, and even Sarevok to *Baldur's Gate* from their high-school D&D campaigns.

"That's the story of *Baldur's Gate*," early BioWare developer Trent Oster says. "They were all characters from this pen-and-paper campaign that's now this immortalized piece of pop culture."

#### WRITING KITCHEN TABLE

##### CAMPAIGNS FOR A COMPUTER SCREEN

A story-heavy setting like *Dungeons & Dragons* needed writing. A lot of writing. More than the team was equipped to handle without at least one actual writer on staff whose job it was to write words and nothing else. So BioWare hired Luke Kristjanson (who now jokingly calls himself "Writer Zero") after BioWare producer Ben Smedstad happened to see Luke's collection of nerd stuff in his apartment.

"Ben looked at all the shit on my walls and went, 'Do you write?' The answer was yes. How could it not be yes?"

Technically, Luke had never been paid to write, but he had paid a lot for an English degree. "The only thing I was doing with my English degree was playing tabletop with my friends, and turns out that's what got me the job."

He got to work hammering out a forty-page module in the Champions setting over the next couple of weeks.

"I was late for my interview because it took four hours to print out," Luke says.

Luke says the intent of *Baldur's Gate* was not to make a serious fantasy for serious people.

"D&D for us was the kitchen table," Luke says. "It's your friends doing something fun. And occasionally one's a jackass and does something weird and you roll with it." That was the vibe they wanted from *Baldur's Gate*: the kitchen table campaign on your computer screen.

"The intent of the simulation was not a fully realized medieval world. It was a simulation of playing *Dungeons & Dragons*."





#### NO ONE KNEW WHAT THEY WERE DOING

*Dragon Age* executive producer Mark Darrah started at BioWare as a programmer on *Baldur's Gate*—after hammering out an installer for *Shattered Steel* in his first week. Mark was employee number thirty-five at BioWare and hadn't even finished school when he accepted the job. He ended up programming all of *Baldur's Gate*'s gameplay as well as the game's combat engine and the system that managed the dialogue.

"I don't know if you should put someone straight out of school in charge of your entire gameplay systems," Mark says, "but a lot of *Baldur's Gate* is the product of people who didn't know any better brute forcing their way through problems."

Devs were punching well above their experience level. Mark, who turned down an entry-level programming job at IBM to work on the game, says it shouldn't have worked as well as it did.

"In some ways the team was too stupid and stubborn to fail," he says.

#### SHIPPING BALDUR'S GATE

BioWare had grown to about sixty people by the time *Baldur's Gate* shipped in 1998. Even with dozens on the team, getting the game finished was a feat some weren't sure the studio could pull off.

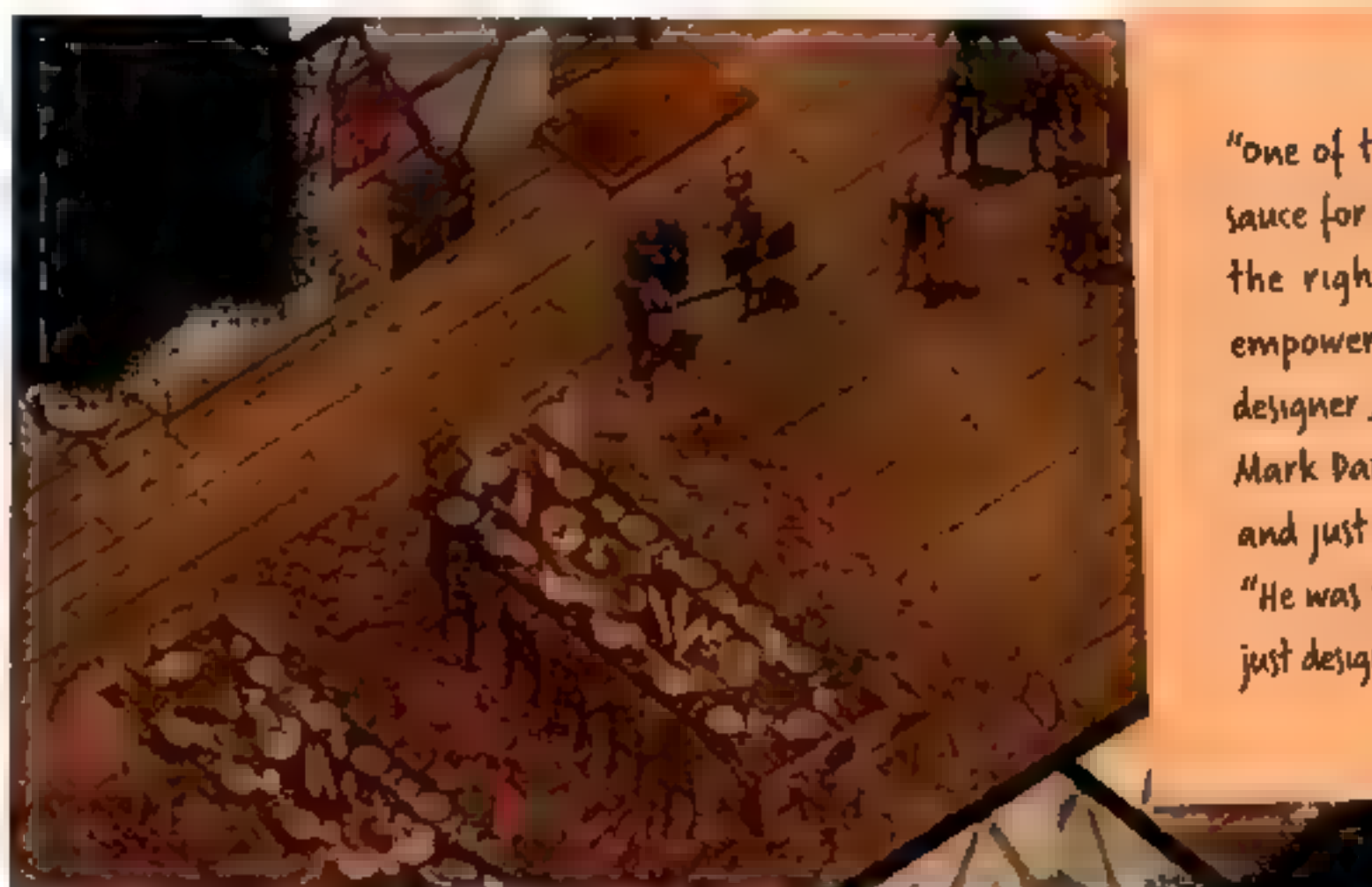
"Our first isometric RPG," Luke says, "and what we decided for our first isometric RPG was to make one that was nine hundred thousand words."

There was a lot of pressure. The doctors still weren't pulling a salary and were taking medical shifts in between development to support themselves and make sure everyone else was paid.

"We were all so tired," Ray recalls. "We were working seven days a week for months on end."

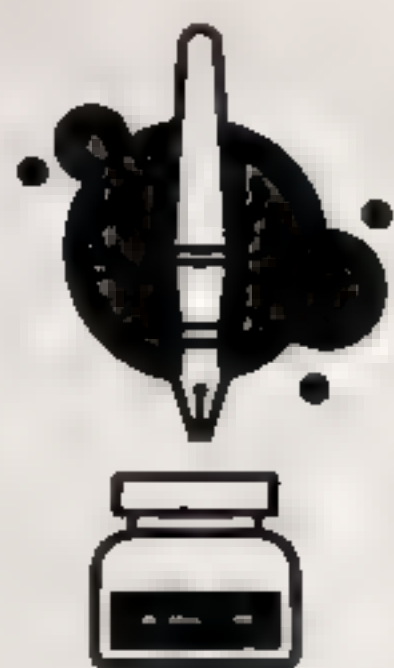
But it was worth the work. *Baldur's Gate* was a massive critical and commercial success that cemented BioWare's reputation in the games industry.

Now they just had to make a sequel that was somehow even better in every way.



"One of the things that was the secret sauce for BioWare: you need to identify the right people and you need to empower them entirely," says lead designer James Ohlen, who would assign Mark Darrah tasks in those early days and just let him run away with them. "He was the programmer. But he would just design things... He didn't need me."

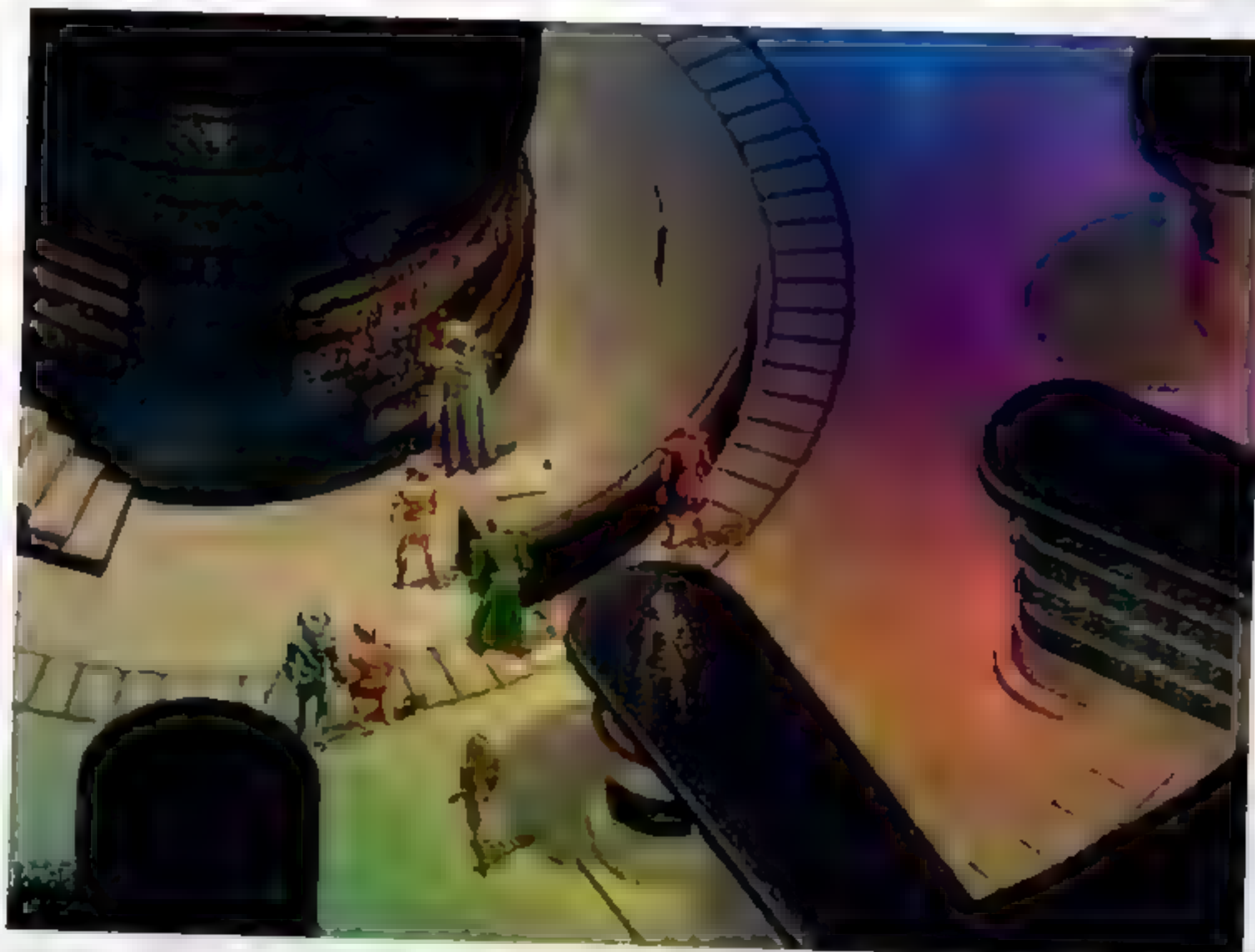




## REAL TALES OF DEVELOPMENT: LUKE KRISTJANSON ON WRITING ANIMAL COMPANIONS

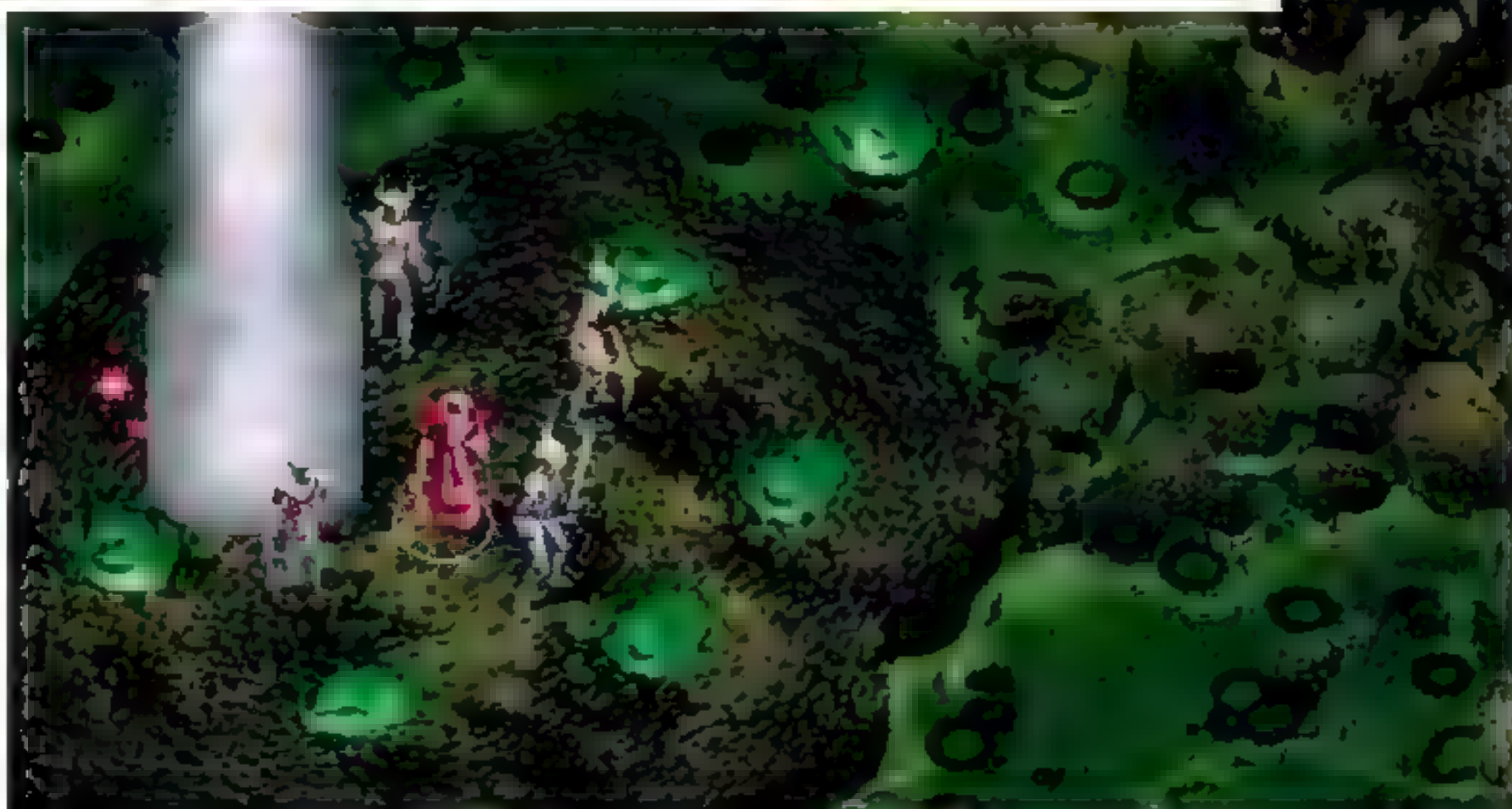
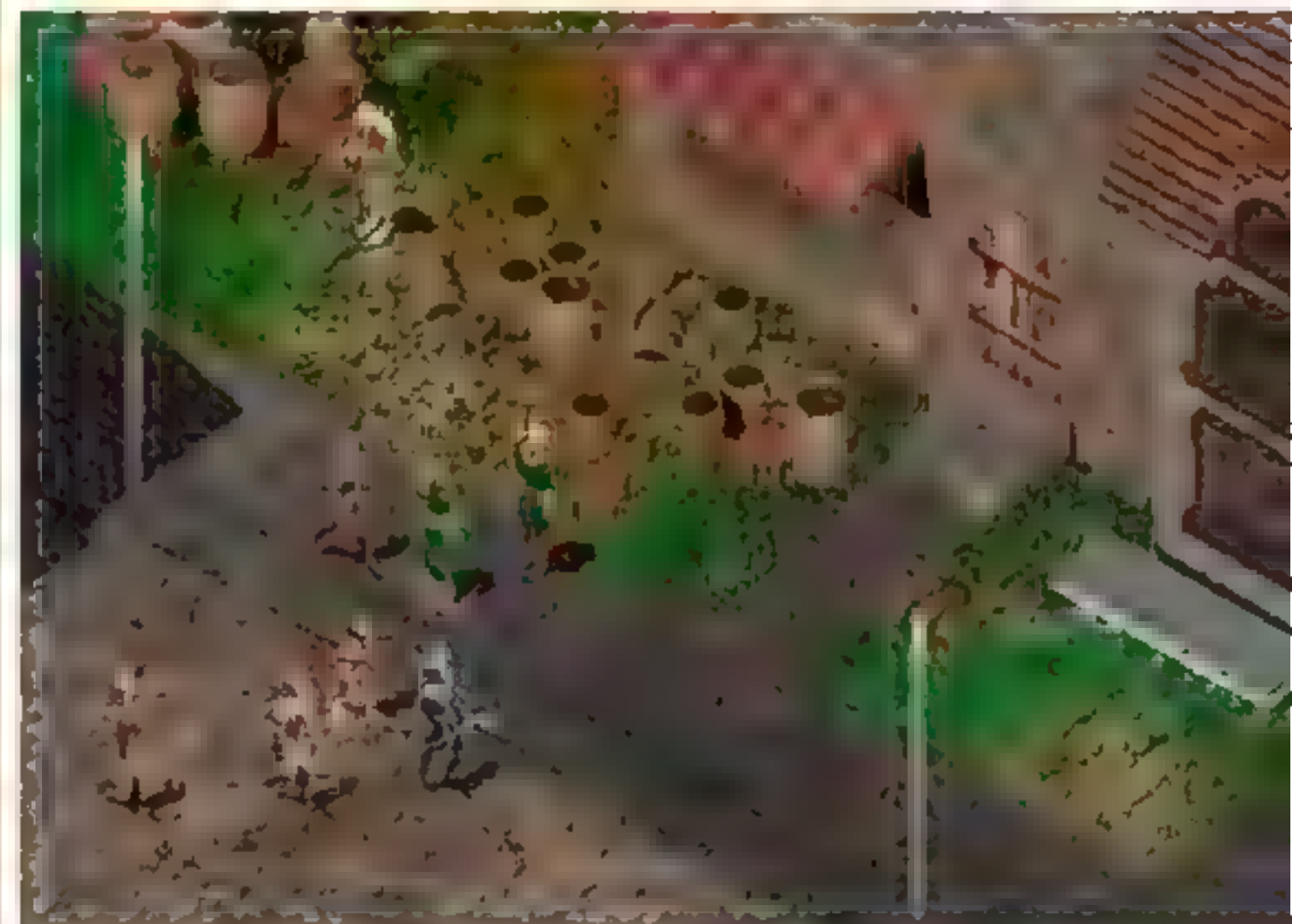
LUKE KRISTJANSON HAS BEEN WRITING for BioWare games since the first *Baldur's Gate*. Among his most memorable characters were Minsc and Boo. Here Luke gives some thoughts on why Boo in particular became such a favorite of fans:

*Why are sidekick animals popular? Maybe they are easier to like than people. Animals are generally seen as more accepting, forgiving, and demanding all at once. They can be used to express complicated emotions without a potentially annoying lecture, say from some halfling joker you eventually want to punch. And perhaps the limitations of AI are easier to forgive when applied to a nonverbal pet. NPCs that players don't directly control are all pretty much big dumb dogs. What the player sees as a stupid move by a human could be interpreted as fairly smart for an animal. It's all perception. We are predisposed to think they are capable of more than they seem. Owls are wise, cats are dexterous, bulls are strong, and hamsters . . . uh . . . are from outer space and insist that we stop thinking so hard.*



In 2020, two decades after the release of *Baldur's Gate* and its sequel *Shadows of Amn*, Wizards of the Coast announced the series' long-awaited follow-up, *Baldur's Gate III*, developed and published by Larian Studios





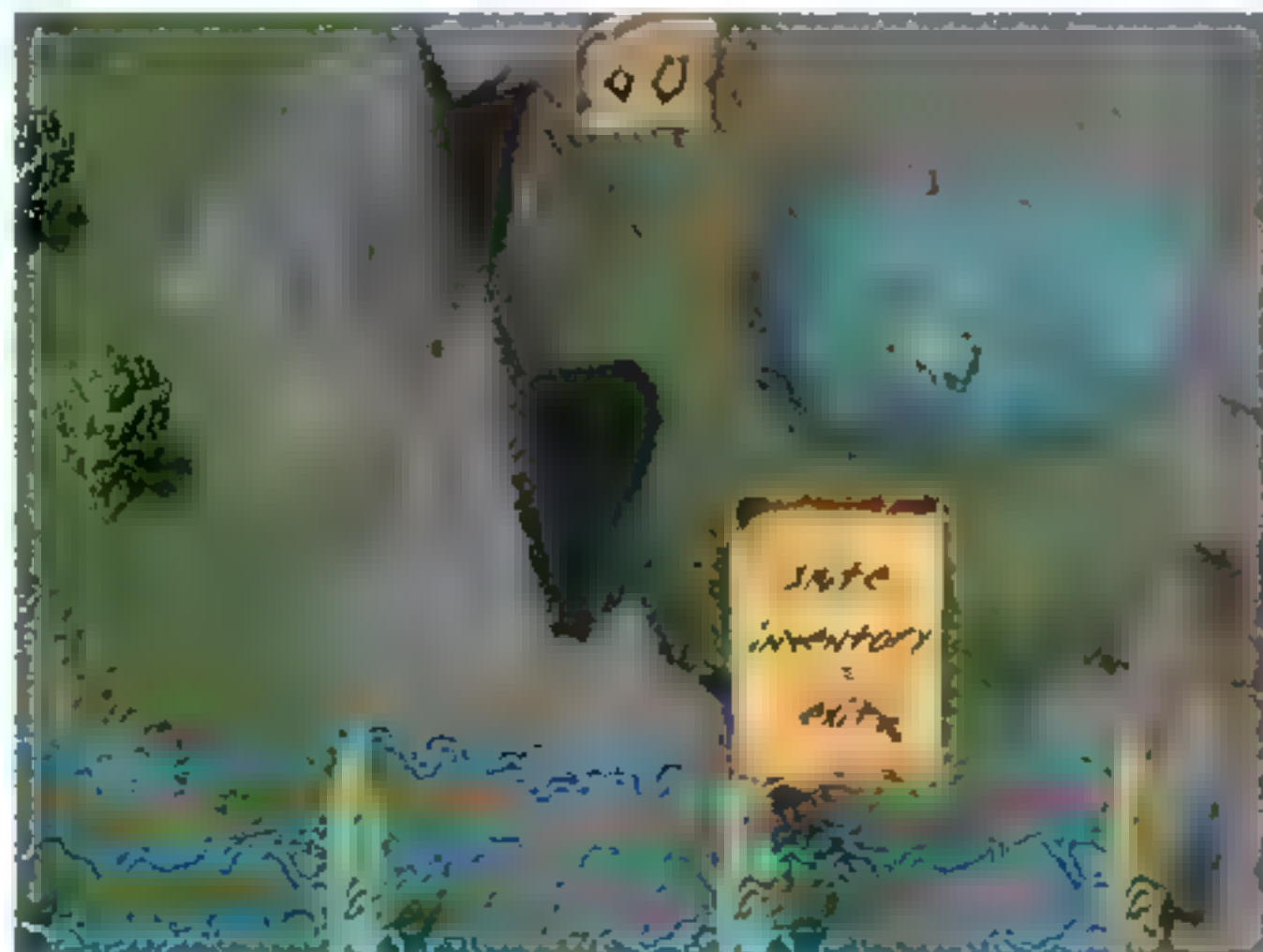
Baldur's Gate with the 3D engine  
 from the Baldur's Gate engine  
 Baldur's Gate was the first  
 to be released. Both the Baldur's  
 Gate and the Baldur's Gate  
 Baldur's Gate was the first  
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# BATTLEGROUND I·N·F·I·N·I·T·Y





## THE BIRTH AND EVOLUTION OF BATTLEGROUND: INFINITY

BALDUR'S GATE DIDN'T START OUT AS BALDUR'S GATE

PRIOR TO GETTING the Dungeons & Dragons license, and even prior to shipping *Shattered Steel*, BioWare's first game was supposed to be something called *Battleground: Infinity*: an ambitious RPG about clashing pantheons of gods and demigods. The game mashed up deities from Norse, Egyptian, Greek, and Roman mythology.

"You'd pick your pantheon, you'd pick your world, and you'd make your character," Greg Zeschuk says. "Then you'd go fight and do quests based on your pantheon."

"It was gonna allow total player choice and freedom," Ray Muzyka says. The setting was inspired by Yggdrasil, the Norse tree of life.

Players would play low-level characters in this world, fighting to ascend through the ranks of their pantheon of choice against friends in an isometric tactical RPG that was almost MMO-style before MMO was even a term. The closest term they had at the time was MUD: a multiuser domain for role-playing.

Most of the initial demo work for *Battleground: Infinity* was done in Greg's basement. They enlisted the help of programmer Scott Greig. While they'd previously worked with Trent Oster and other developers at Pyrotek Game Studios, Greig was BioWare Corp.'s first official hire. Greig also drew *Battleground: Infinity*'s key art (see opposite page).

"It was pretty funny," Greg says. "He's like, 'I showed at some guy's house, these . . . doctors, and they wanted to give me a job. I thought: I got a good job now but ah, what the hell!'"

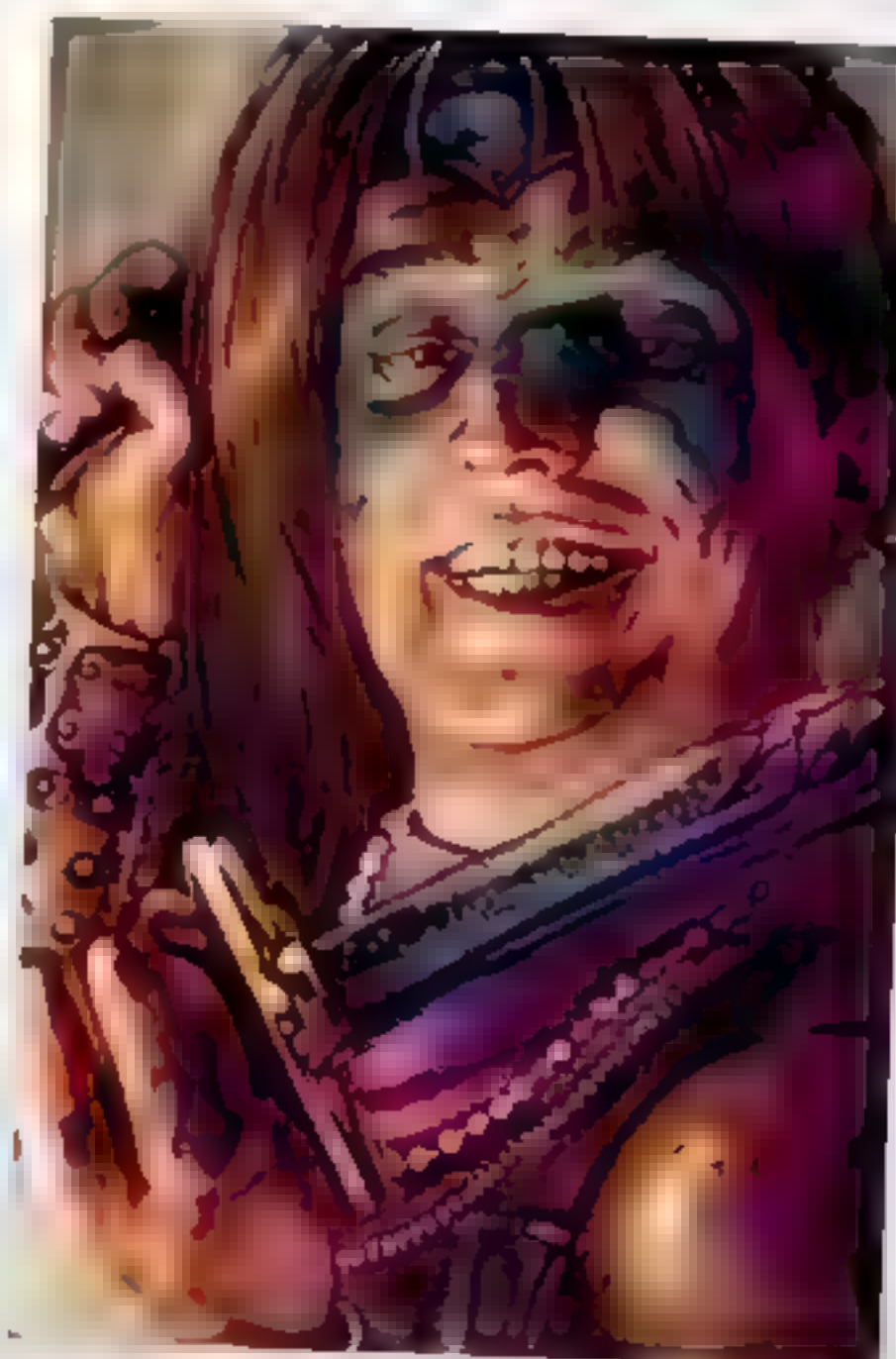
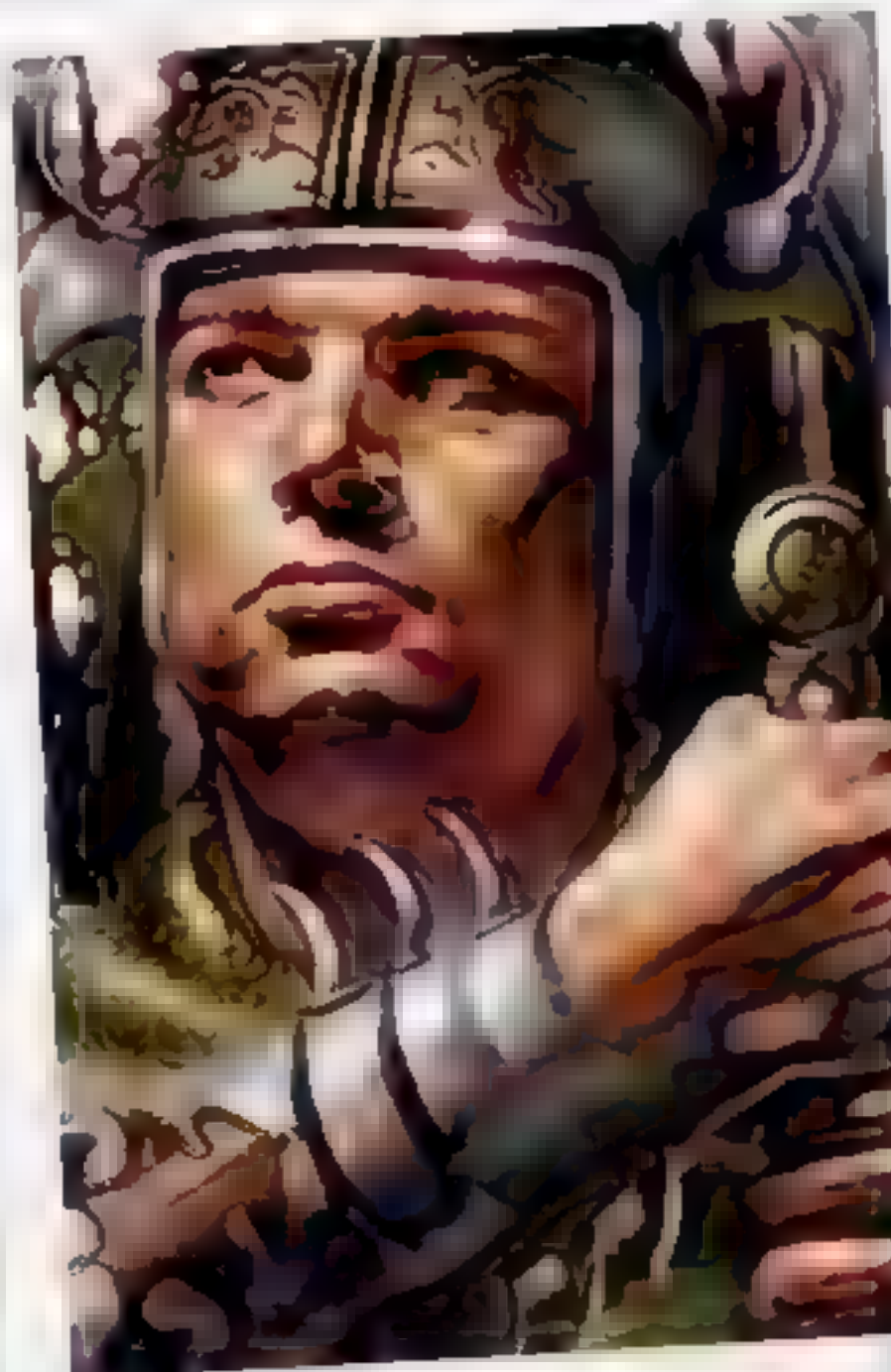
The guts of the game had potential, and it had some neat tech, like sliding bitmaps, but the narrative wasn't clicking. It needed something else.

It needed Dungeons & Dragons. So, after securing the D&D license from Interplay, BioWare set out building what would become *Baldur's Gate* using *Battleground: Infinity* as a base.

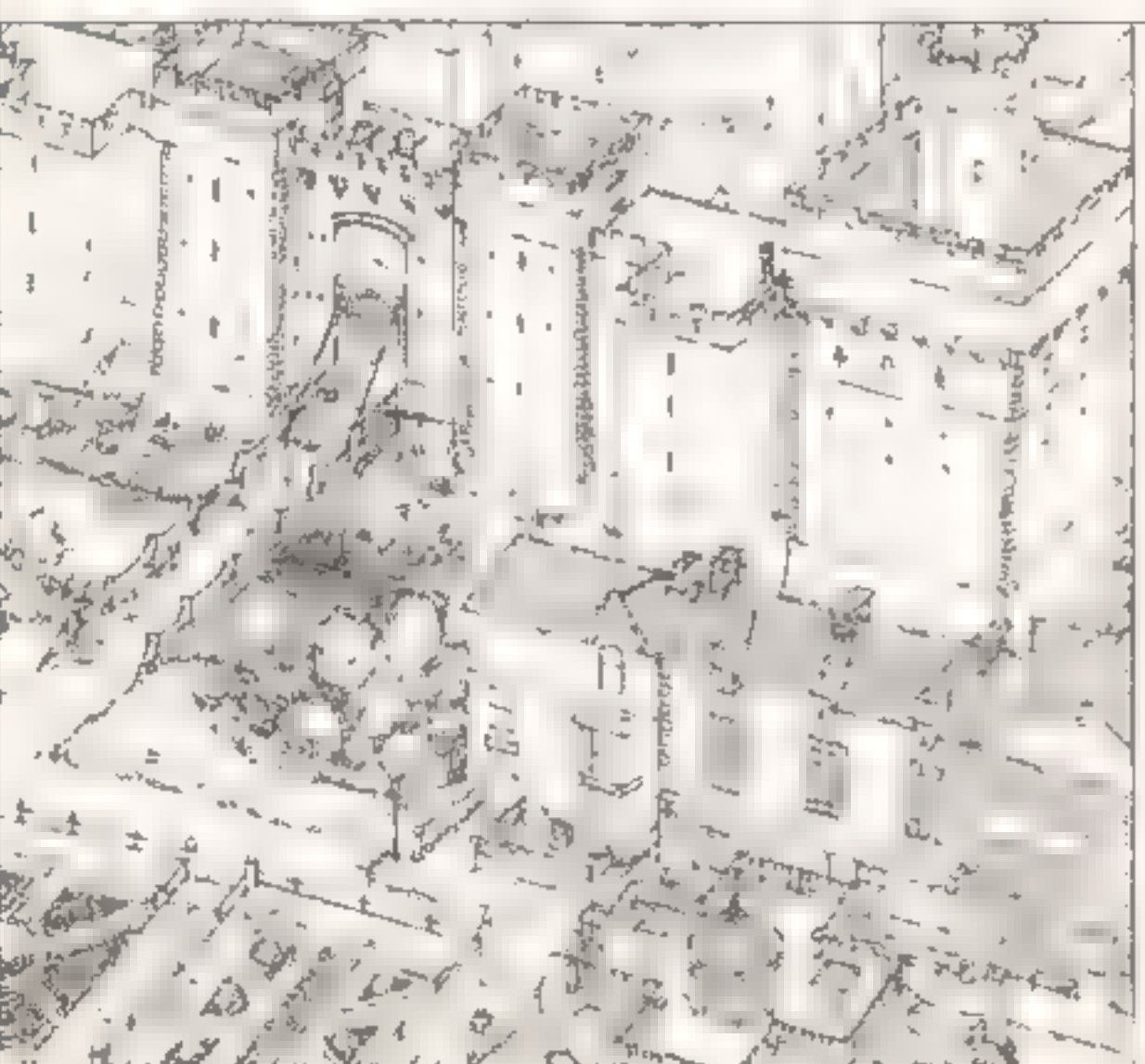
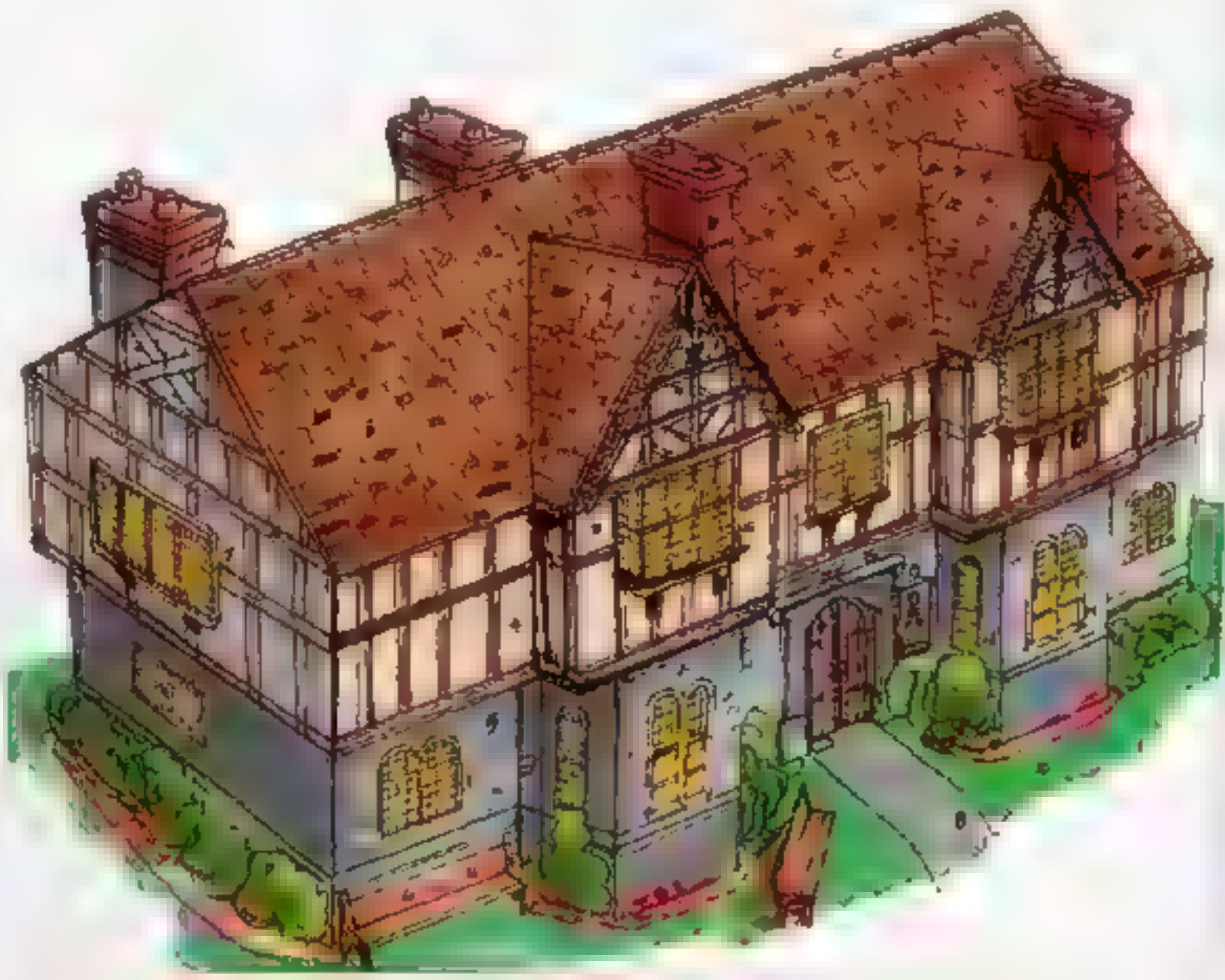


## DRS. CORAN AND AJANTIS

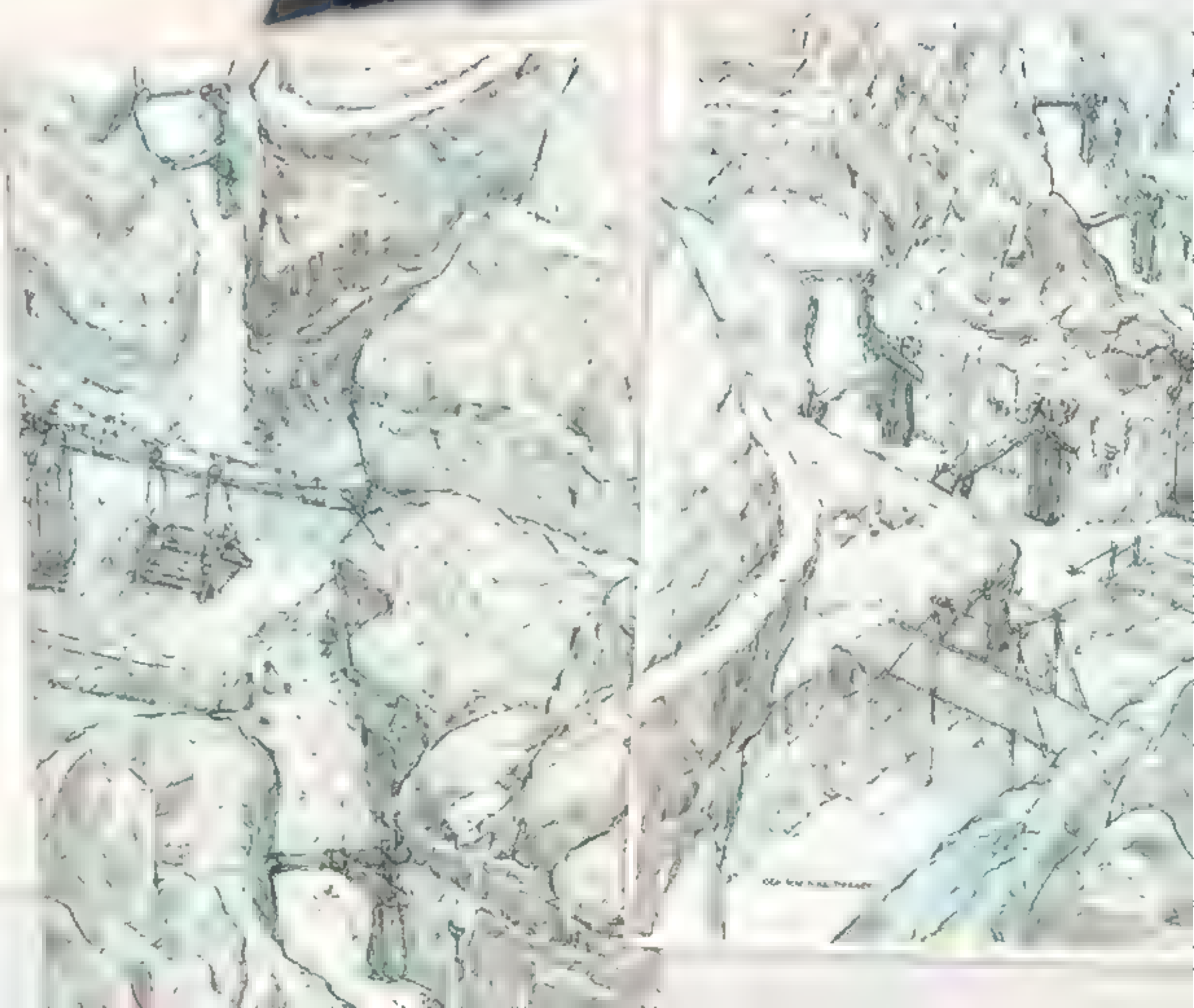
MANY OF THE ORIGINAL *BALDUR'S GATE* portraits were based on BioWare developers working in the studio at the time. The lawful good Ajantis Ilvastarr (left) and chaotic good Coran (right), for example, are based on the also lawful good Ray Muzyka and very chaotic good Greg Zeschuk.



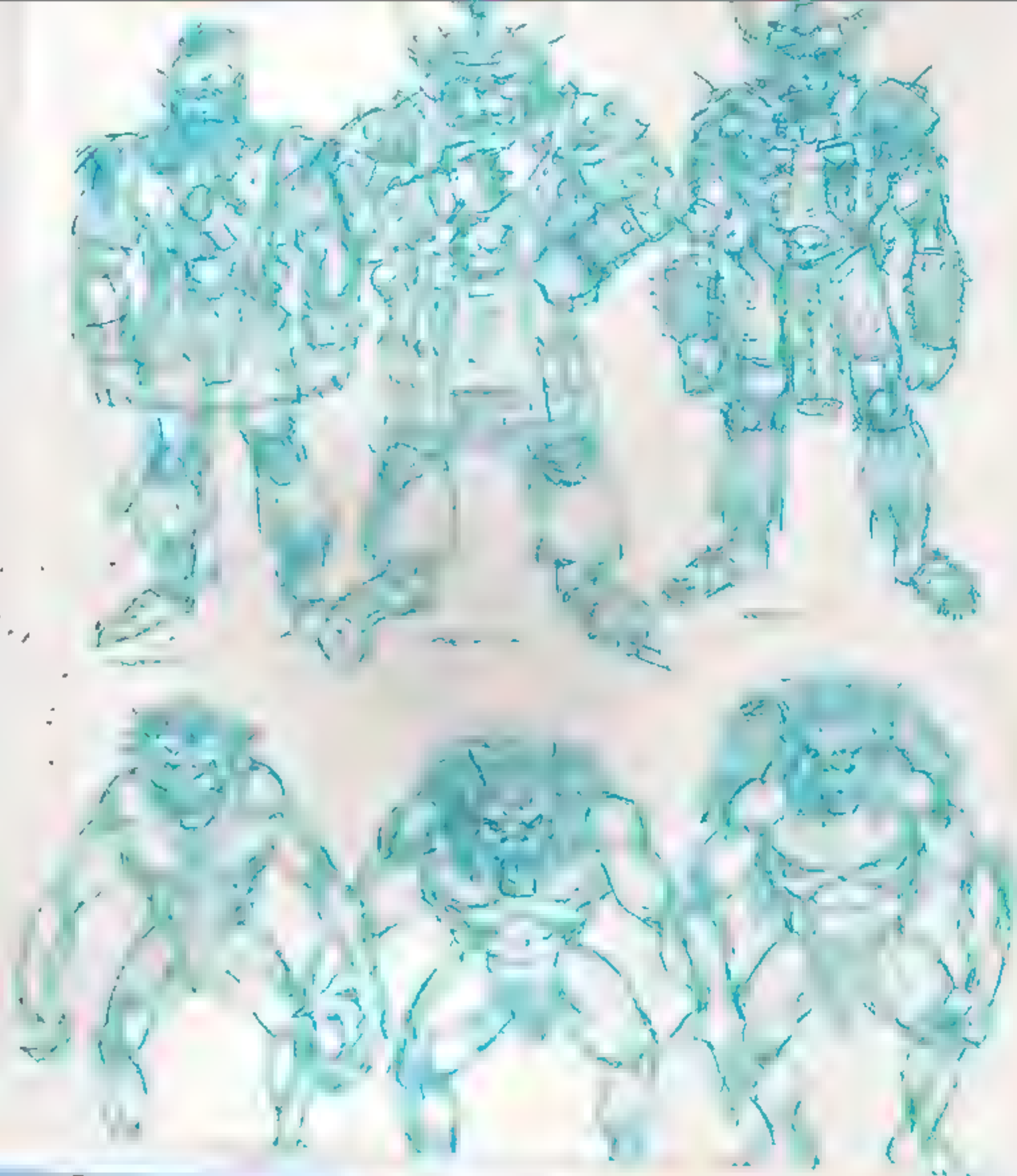
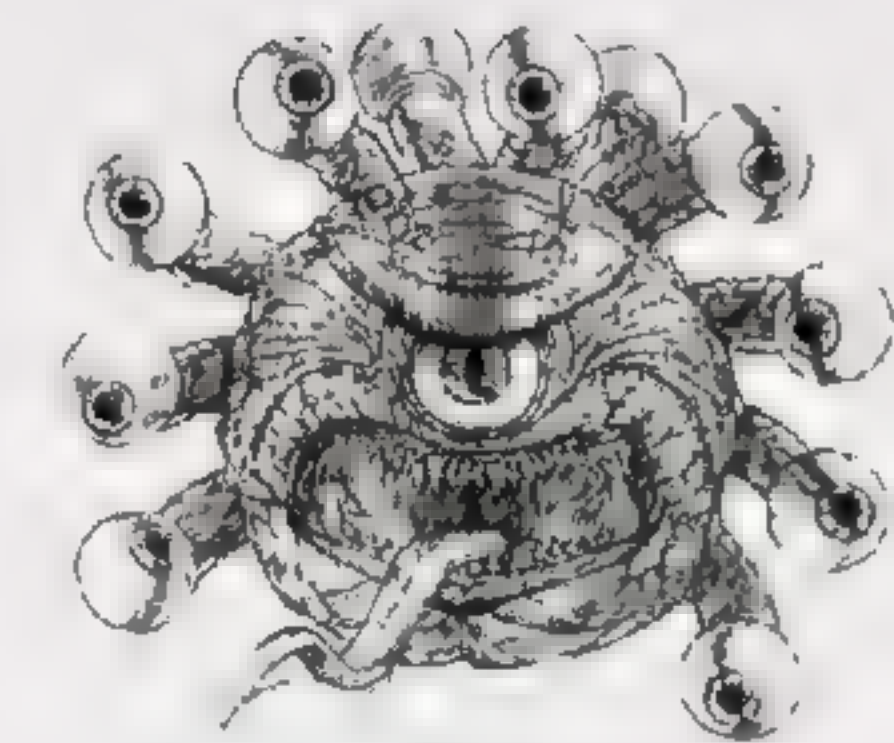




Concept art for *Baldur's Gate* was hand drawn by John Gallagher in stunning detail, with a perspective to mimic the in-game isometric view of the environments.







## SOME EXPERIENCE REQUIRED

BEFORE BIOWARE, DEVELOPERS HAD SOME PRETTY ODD JOBS

WHEN YOUR VIDEO GAME STUDIO is founded by medical doctors, you're liable to hire developers with some pretty unique backgrounds. Here are some memorable jobs that developers had on their résumés prior to working at BioWare:

- 9-1-1 Operator
- Garbage Man
- War Correspondent
- Hotel Night Manager<sup>1</sup>
- Comic Book Artist
- Comic Book Store Owner
- Line Cook
- Coal Miner
- Candlestick Maker
- Pilot
- Fruit Fly Geneticist
- Monastery Maid
- Vampire Effects Artist<sup>2</sup>
- Pharmaceutical Sales Rep
- Lip-Synch Performer<sup>3</sup>
- Bank Teller
- Olympic Bobsledder

- <sup>1</sup> Hotel was across the street from BioWare's Calgary Trail studio
- <sup>2</sup> Made vampire skin sparkle, made dogs talk, and gave Dwayne "the Rock" Johnson wings when he played the Tooth Fairy
- <sup>3</sup> With backup dancers, performing songs promoting bicycle safety at an amusement park



Before joining BioWare on Mass Effect Andromeda, editor Ryan Cormier worked as a justice reporter and war correspondent





## LIZARDMAN AND THE UNDERDORK

EARLY BIOWARE CREDITS WERE LOUSY WITH NICKNAMES

FLIP THROUGH THE MANUALS of *Baldur's Gate* or *Shattered Steel* and you're liable to uncover a swath of devs with some pretty weird nicknames. In true BioWare tradition, many required no context; they already told a story. And while the practice of including nicknames in the credits more or less went by the wayside with *MDK2*, it sure was a thing in those early days.

Writer Zero Luke Kristjanson, who somehow managed to avoid being nicknamed, blames the practice on some combination of youthful frivolity and Greg Zeschuk, who would wander the halls muttering gibberish that often stuck to people.

"We were kids who didn't know how to be professionals," Luke says. "Half of our business cards even had nicknames."

What follows is a modest sampling of nicknames, collected from the original credits of *Shattered Steel*, *Baldur's Gate*, and *Baldur's Gate II: Shadows of Amn*:

- Dean "Macgyver" Andersen
- Webb "Pizza Repair Man" Anderson
- Derrick "the Underdork" Collins
- David "I'll be done with BG and working on MDK2 next week, honest" Falkner

- John "King of Couth" Gallagher
- Scott "Get the hell out of the art department Scott!" Greig\*
- Scott "do I have to go home now?" Horner
- Graeme "Squishy Retrieval System" Jahns
- Scott "Lizardman" Langevin
- Jon "is this for the shareware?" Liu
- Raymond "pocket full 'o' RAM" Muzyka
- Raymond "Zuke" Muzyka
- Marcia "Marsha" Olsen
- Trent "Problem" Oster
- Denis "Mr. Positive" Papp
- Rob "I wish I could dunk" Sawchuk
- Allan "slob ++" Theriault
- Daniel "Superman" Walker
- John "The Evil Genius" Winski
- Augustine "ook" Yip
- Greg "The Son of Silicon" Zeschuk

\*Scott Greig, then the lead programmer, now works as an artist



## Credits

Lead Modeler  
Chris Smith

Modelers  
Eugene Scher  
Derek Smith  
Derek Smith

Senior Sculptor  
Derek Smith

Art Processing  
Kathleen Davis

Graphic Designer  
Derek Smith

Performer  
Derek Smith

Modeler  
Derek Smith

Director of Animation  
Derek Smith

Lead Technical Animator  
Derek Smith

Animators  
Derek Smith

Additional Animation  
Derek Smith

Lead Data Entry and  
Quality Assurance  
Derek Smith

Additional Data Entry and  
Quality Assurance  
Derek Smith

Master of the Bogs  
Derek Smith

Master of Writing and  
Competition  
Derek Smith

System Administration  
Derek Smith

Executive Producers  
Derek Smith

### Interplay Productions

VP of Development

Director of Quality  
Assurance

QA Manager

QA Project Supervisors  
Derek Smith

QA Lead

QA Senior Testers

QA Testers

QA Testers

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QA Testers

QA Testers

Foley Editing

Music by

Additional music and  
Supervision

Vocal Casting / Supervision

Vocal Casting

Vocal Casting

Vocal Casting

Vocal Casting

Vocal Casting

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Vocal Casting



## FROM A FIRESIDE CHAT WITH MINSC AND BOO

**IN THIS EXCERPT FROM** marketing text done for *Baldur's Gate*, writer Luke Kristjanson answers questions as everyone's favorite neutral good human ranger and his miniature giant space hamster:

**Interviewer:** OK, I want the real scoop: How did you find Boo? What sort of counsel does he provide when he "speaks" to you?

**Minsc:** You ask how he speaks with your tongue in your cheek, but I say to you that he talks like the best of any of us, with words that ring true for those that wish to hear, and far clearer too, for the only thing in his cheek is the occasional nut. His counsel is my focus when I find it . . . difficult . . . to think clearly, either from the guile of villainy or some long persisting headache. Certainly there are rangers that prefer the company of perhaps a giant bear or some great cat or another, but I am large enough on my own and need not compensate.

As for how Boo and I met, I owe that to a nameless traveling merchant. Dynaheir and I had been drawn to rout a nest of villainy while traveling through Sembia, and though we were victorious, I suffered what I agreed was "an astounding blow to the head." For weeks I was a shadow of my former self. A large shadow perhaps, but still not nearly as effective. When we met the merchant he directed my stumbling gaze to a small cage, and explained the special nature of what was inside. It would be grand to say that Boo

came to me from his home amongst the stars, but, in truth, I purchased him for a goodly sum and we have been together since.

**Interviewer:** What makes you think he is a miniature giant space hamster? Does he have any special abilities associated with his extraterrestrial nature?

**Minsc:** What makes you think he is NOT a Miniature Giant Space Hamster? Who would have more insight into the attributes of my animal companion than I, Minsc! Besides, the merchant had an honest face. He was very insistent too, waving his pipe as he named the stars that Boo might have seen. There were many more words amidst his "thee"s and "thou"s that I did not even recognize, but everything became clear to me as he spelled it out. His price seemed more reasonable as well, even as he raised it once or twice. But enough about Boo, he is blushing because of the attention. He is pink under his fur regardless, but I can tell when he is nervous

**Interviewer:** Any advice for burgeoning rangers who want to walk the path of righteousness?

**Minsc:** Evil is a maze of deceit, and the cheese it hides is never worth the running. Oh, and never trust an ice weasel when your hamster is on the line

**Interviewer:** You are a pretty good-natured fellow. What is it that sets you off? Any pet peeves? What bugs you most about evil?

**Minsc:** What bugs Minsc and Boo most about evil is that it is THERE. We need not dwell on tiny details trying to decide if someone is "a little evil" or "very evil." Ask a villain if Minsc is "a little large" or "very large" when I am in their face and they will not have an answer. Why? Because all that matters is that I am there and they are there, and that I will learn their nefarious heads a thing or six about justice before they become so utterly villainous that we must comprehend their deeds in bite-sized chunks of bad, instead of all together as a depraved whole that must be filled! I have no peeves, only a hamster.

**Interviewer:** What the hell's the deal with that purple tattoo on your head?

**Minsc:** Many warriors of Rashemen bear such trophies, mostly as scars from battle, but not everything important happens at the end of a sword. Yes, that surprised me too. On the journey with Dynaheir I met many people, and one was a valiant warrior from a land with traditions like my Rashemen, if a bit more reserved. She was well impressed with Boo and I on the battlefield, but was concerned

that my fury might some day overwhelm Boo's calming influence. She had proven herself to me, so when she offered an exchange, I accepted. I am told the marking stands for balance and is well respected in her home. I wear it proudly, just as she wears the symbol of the Ice Dragon Berserker Lodge, though not placed quite so prominently . . . ahh, but Boo's stare has reminded me of an oath long promised, and I will speak no more of it.

**Interviewer:** If you had to choose between kicking evil in the head or the behind, which would you choose, and why?

**Minsc:** I'm not sure I understand the question. I have two feet, do I not? You do not take a small plate when the feast of evil welcomes seconds.

**Interviewer:** What is your favorite sword and why? Bow or crossbow?

**Minsc:** Now this topic I know well, though I care less for the weapon than the target. A fine sword will serve for years, but if evil will not wait for the forging then a chair leg will do in a pinch. Yes, I have held many blades, though I am not fond of those found near Beregost. They seemed to break faster than the heads I hit with them. I have heard of something called "Crom Faeyr," but now I hold "Lilarcor," and it is well suited to my battle fury. All swords are meant for combat, but I never had one actually tell me so! I tell you, I thought I was hearing things, but Boo assured me I was not.

It is a good weapon, but my favorite . . . and you will be disappointed . . . my favorite was not magical at all. A simple two-handed blade, now at the bottom of Lake Ashane with the man that gave it, and again I will speak no more. Bow.

**Interviewer:** Final question: You've traveled much of Faerun. Any favorite vacation spots?

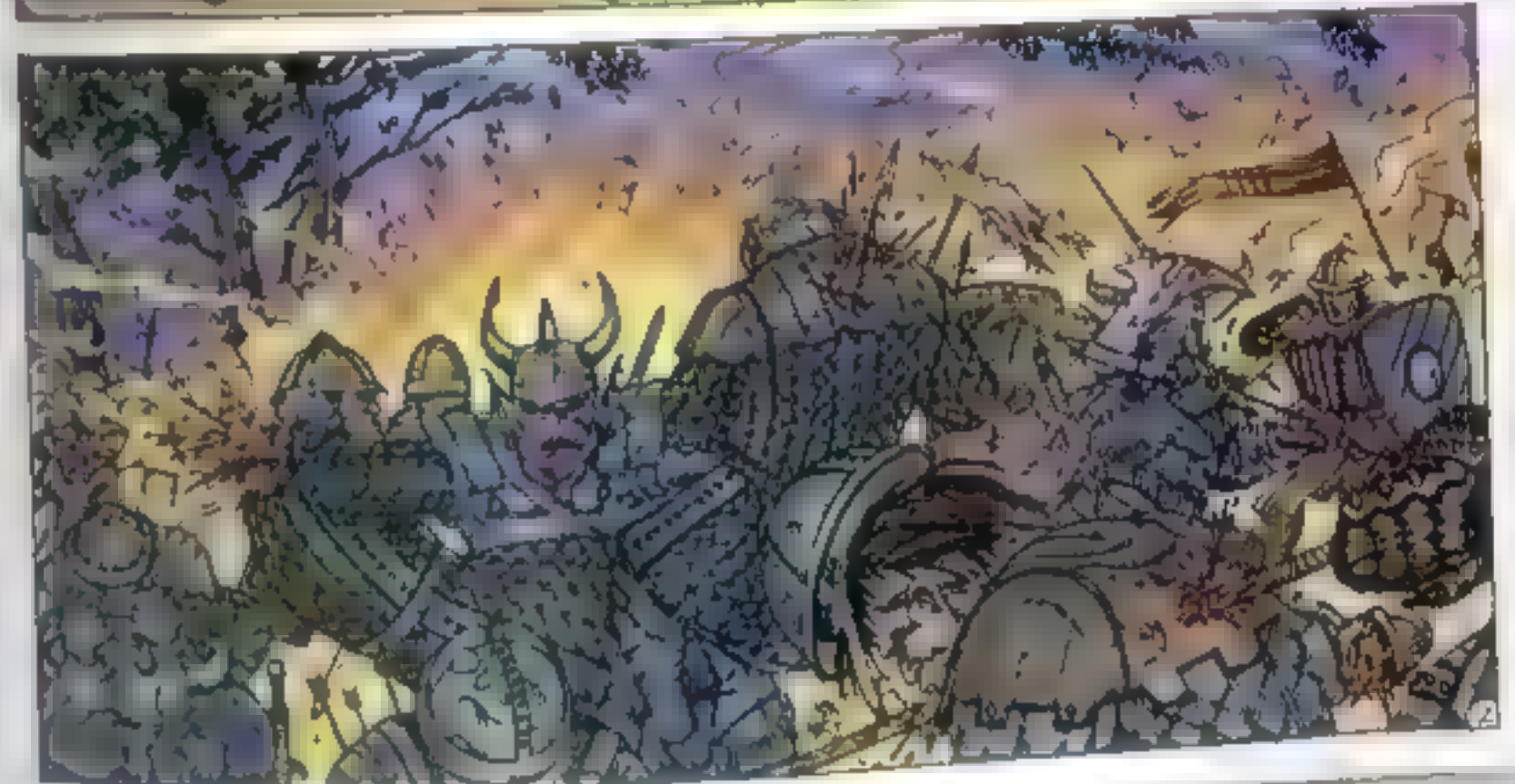
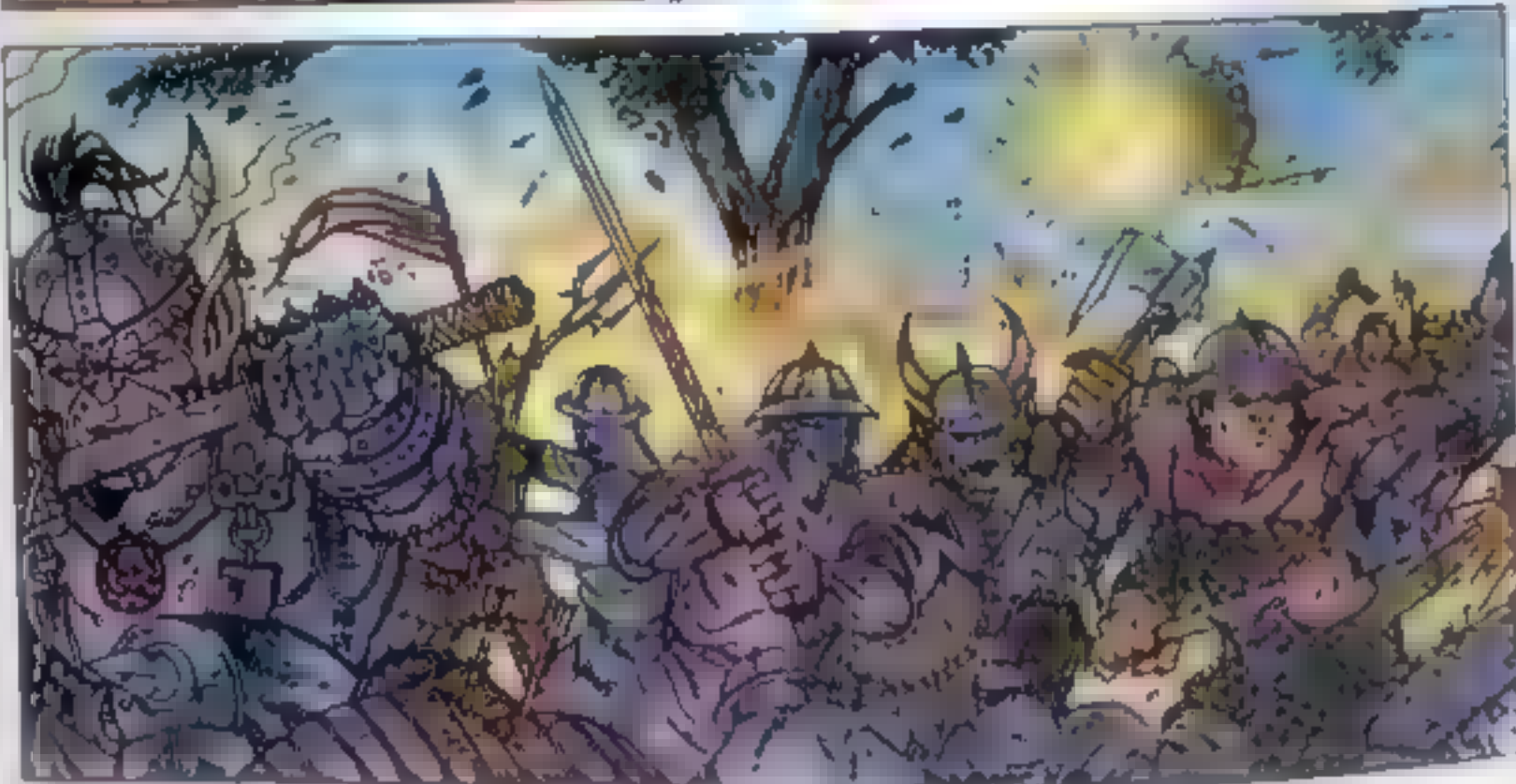
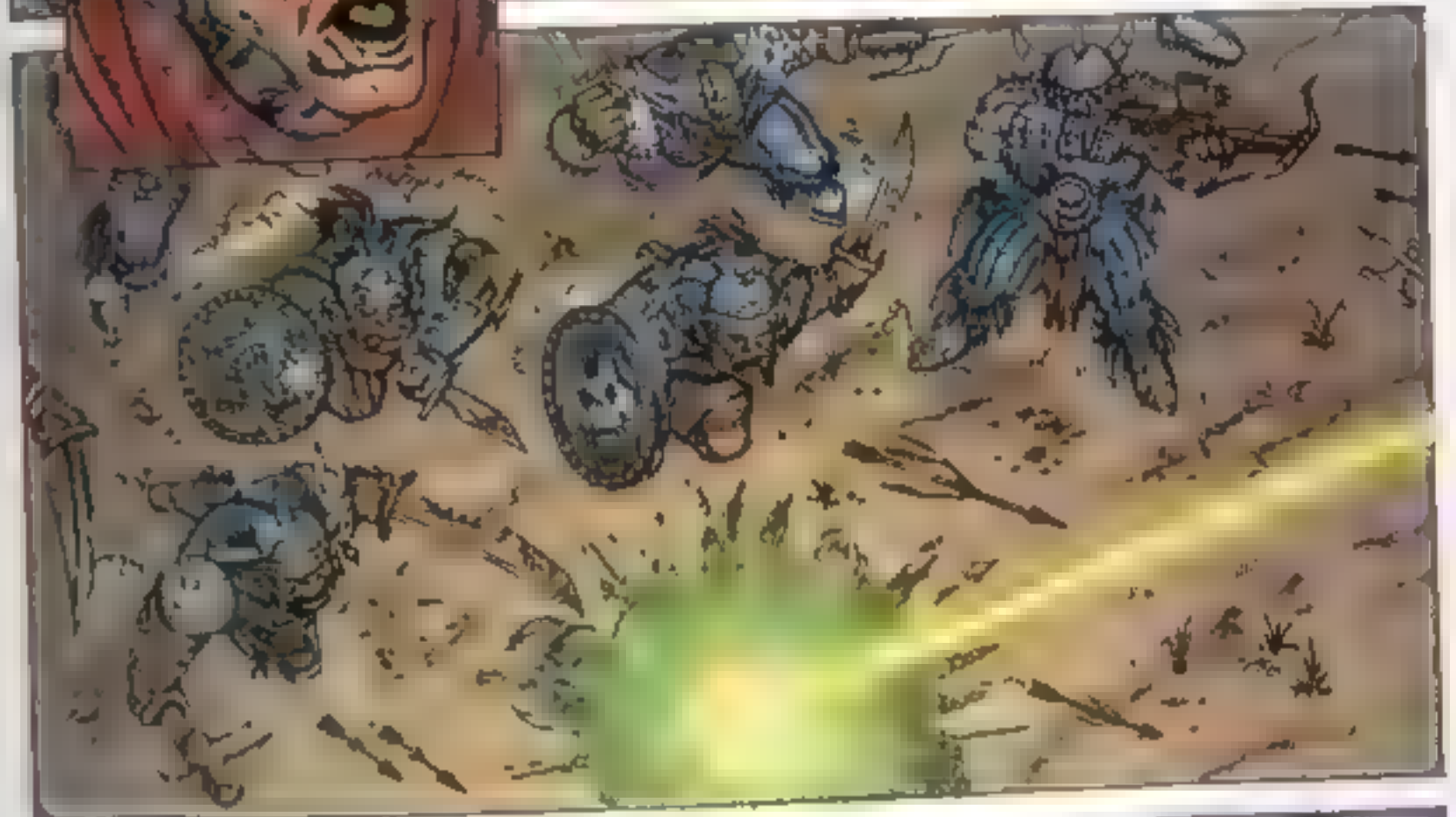
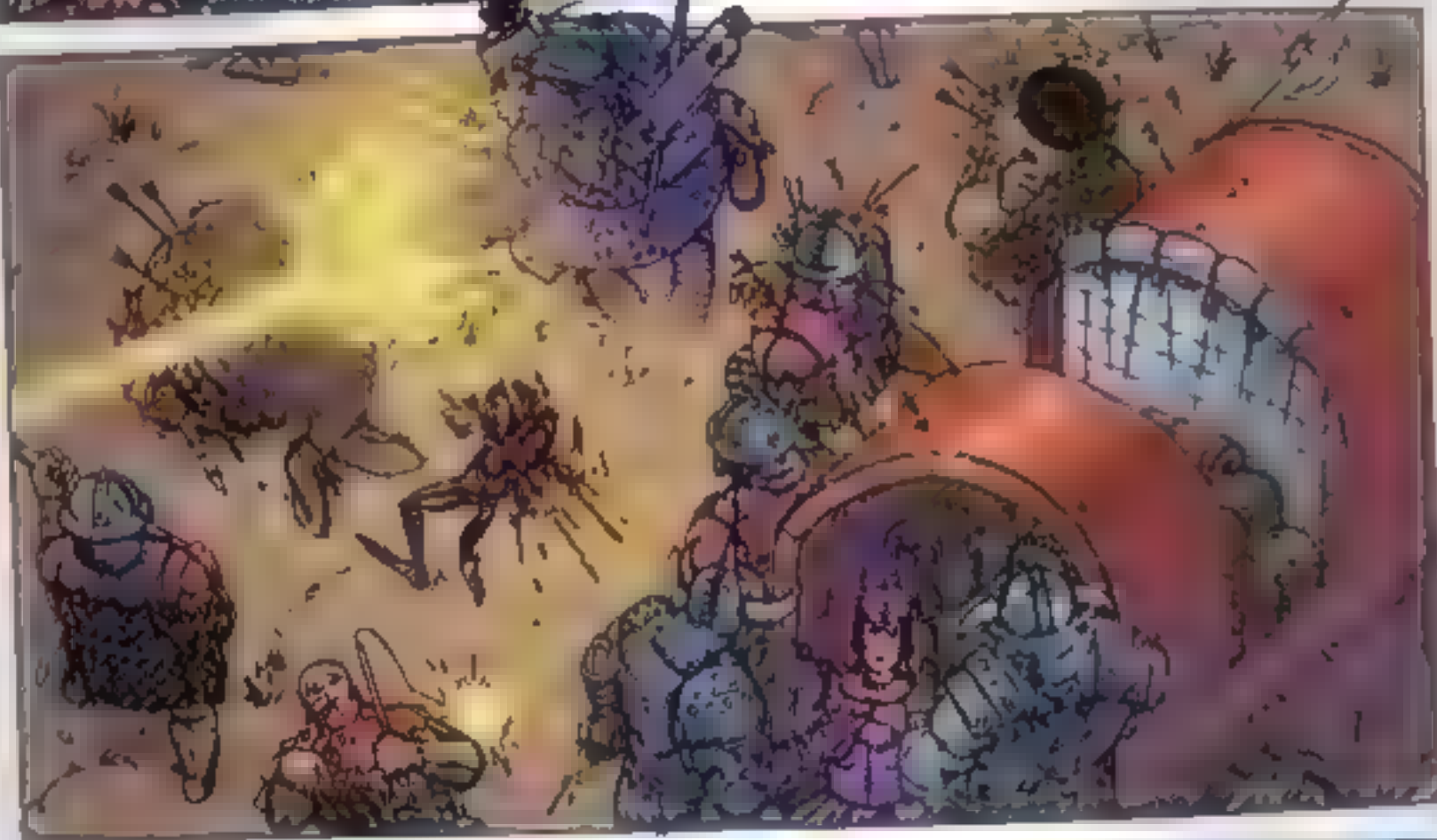
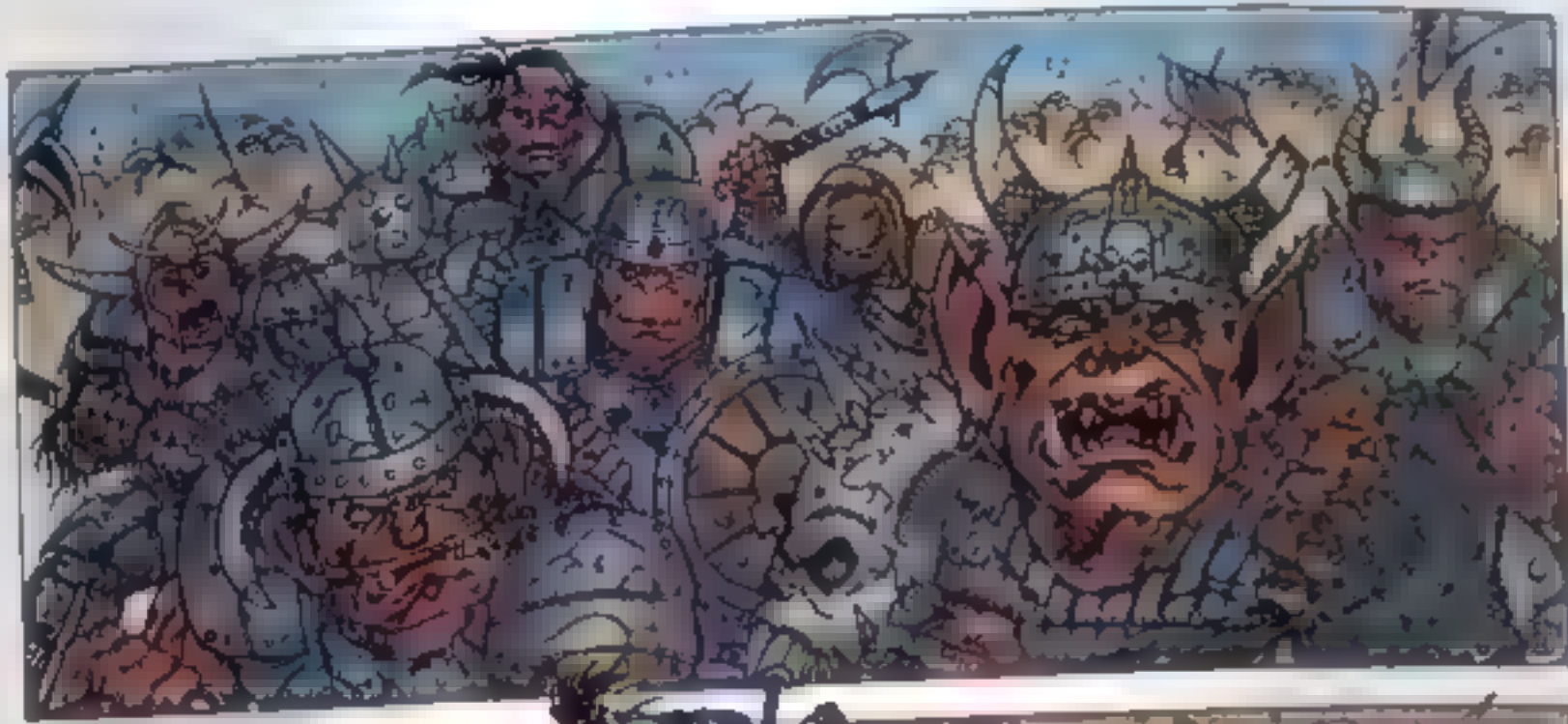
**Minsc:** So often Boo and I are at odds with the places and people we meet. You know, opposing a strange cabal here, deposing some villainous overlord there; it is hard to truly enjoy the sights when they are burning or under siege. Still, I hold high hopes for the future. Boo would like to see the jungles of Chult, but that is just the giant rodent in him speaking and he may find it too stressful once we arrive. I hear good things of Neverwinter, though I prefer my North good and cold. I have important business here in Amn you know, hero-ing and all, but I might cross the Trackless Sea someday. I think an old companion went that way.

And, of course, one day we will go home, right Boo?

(squeak)







To promote the release of *Baldur's Gate*, James Ohlen and Luke Kristjanson wrote a comic with art by lead artist John Gallagher that featured characters and locations from the game.



## REAL TALES OF DEVELOPMENT: OWEN BORSTAD HAS HIS HEAD IN THE GAME

IT WAS PROGRAMMER Owen Borstad's second day at BioWare and he was only starting to get his bearings in the rabbit warren that was the Whyte Avenue studio:

*I grabbed breakfast in the lunchroom and was walking up the stairs to the second floor, where my office was. I misjudged the last step and tripped and promptly fell forward, putting my head through the wall.*

*Like, I left a hole that big in the drywall, "that big" being basically the size of my head, because it went thunk! Straight on. And I'm sitting there, kind of stunned. I'd missed the internal reinforcements by like an inch. And Ray [Muzyka] comes out of the office that I had just thunked into the wall of and he's like, "Oh my goodness, are you okay?" That office was Matt Goldman's and he was doing*

*itches of Jade Empire at the time to Ray. And then Ray insisted, being a doctor, that I go get checked out for a concussion and so the receptionist, who was Theresa Baxter at the time, drove me to the hospital and I got checked out for a concussion.*

*I had been harassing Theresa for a few weeks to get hired. And you know, the next day or two days after going through onboarding and the interview process and everything, she's like, "Okay, I'm taking you to the hospital now. This is a really interesting start to the company." And I'm like, "Yeah, that's how I get ahead. I'm really leaving my impact on the company."*

Fun fact: Owen isn't the only BioWare developer to accidentally put their head through a wall at the studio. His story was just the one we decided to include in the book.





## BE ALERT BERT AND STORIES OF THE SEVENTH FIRE

BIOWARE'S BRIEF FORAY INTO BIOANIMATION

IN THE MID TO LATE NINETIES, computer-generated (CG) animation was making waves on kids' shows and in theaters. BioWare, still trying to figure out what it was exactly, decided to use its game animation team to also make broadcast-quality CG for TV under the name BioWare Active Media.

"At that time, it wasn't clear whether we were going to be doing this stuff or video games," recalls Steve Gilmour, who worked at BioWare for twenty years in various animation roles on nearly every release from *Baldur's Gate* to *Anthem*.

As a member of BioWare Active Media, Steve also made logo animations for QuickTax software and animated a mother wolf and her cubs for a short-lived Canadian TV series called *Stories of the Seventh Fire*, which featured stories passed down among local indigenous peoples.

BioWare's work on the show's "Wolf Tale: Legend of the Spirit Bear" episode marked the first time the team animated fur, Steve says.

Then there was *Be Alert Bert*, which marked the first time BioWare animated a spider with a mustache.

A mostly live-action show, *Be Alert Bert* starred giant anthropomorphic bees—or, more accurately, actors in bee costumes—who taught kids the importance of safety.

"They wanted to have some CG, but it was expensive enough that they were limited to small pieces," Steve says. The project had ultra-aggressive deadlines, even by video game standards. "I remember our first daughter was born, and three days later, I was working for six weeks straight making the opening title sequence for the show. I did voice acting. I wrote the script, I made the storyboard. I sat the animators down and said: 'Here, this is what you're doing.'"

"I was grateful when the *Be Alert Bert* stuff exploded because (a) I hated it, so much, and (b) it was the video game stuff that was really interesting."

BioWare's Active Media arm continued to have a place on the company website until 2001, when BioWare finally abandoned its dreams of animating bees and tax software in favor of finishing *Star Wars: Knights of the Old Republic* and *Neverwinter Nights*.







In the early years, BioWare contracted out their computer animation department to create sequences for television shows like *Be Alert Bert*.



## REAL TALES OF DEVELOPMENT: LUKE KRISTJANSON'S CHIMP FACTOR 5

AS A DESIGNER, it can be tempting to hold a player's hand, to make sure they experience carefully crafted game content without a lick of frustration—in precisely the way the designer intended. It's easy to go too far in this respect, taking away the challenge entirely.

This approach tends to irk Luke Kristjanson, who believes designers should respect a player's intelligence enough to ask them to think a little.

"There's a staircase in *Baldur's Gate*," Luke says. "You have to go up it to find the next step of the plot. Ray [Muzyka] was concerned that people wouldn't realize there was a staircase, so he had me create a character to stand next to the staircase to say: 'There's a staircase here.'"

Luke said to Ray: "'Okay, fine, but I'm calling this bug Chimp Factor 5, because it's the dumbest thing.' And then I bought chimps, and I carved '5' in their chests."

Luke defines Chimp Factor 5 as a "reminder that to most players would seem patronizing." For Luke, and only Luke, it has become shorthand when discussing this ever-recurring tendency in game design.

"If the player needs this prompt, how did they get the disc in the tray?" he says.

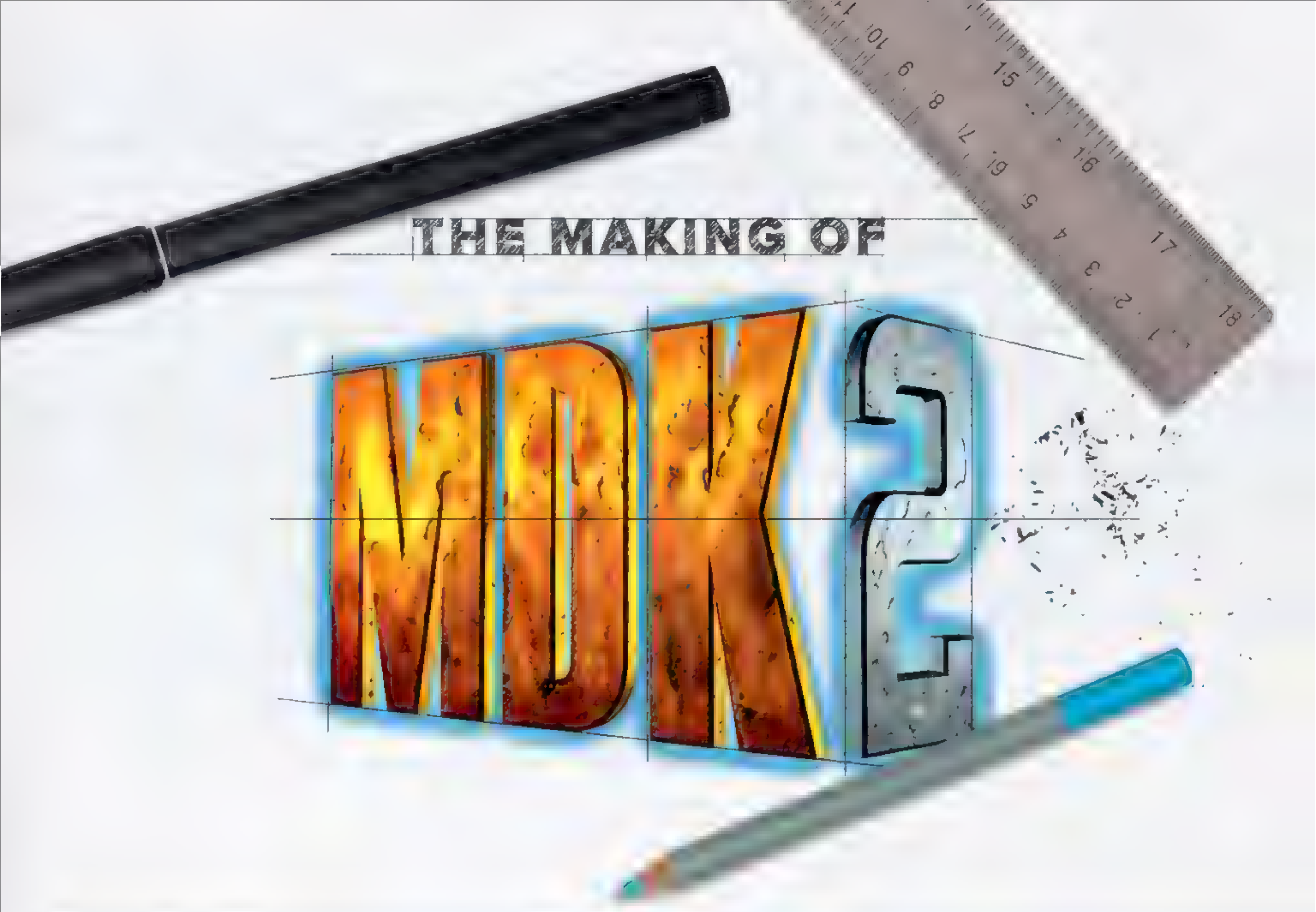
After the staircase, Luke started keeping a small army of Chimp Factor 5 toys on his desk. "Because I dwelled on stuff like that back then," he says, adding that in hindsight, Ray may have been right about the staircase after all.

Luke still has the chimp figures squirreled away, but he doesn't really use them anymore.

"A deliberate mantra on our current project is: we will respect the player," he says. "That includes respecting that they're smart and there to play. That doesn't mean we deliberately confuse them. But it means that we trust that they're not going to go and make a sandwich midsentence."







## THE MAKING OF



### THAT TIME BIOWARE GOT PRETTY BIOWEIRD



#### KEY FACTS *MDK2*

**RELEASE DATE:**

March 30, 2000

**GENRE:**

Action platformer

**PLATFORMS:**

Dreamcast, Windows,  
PlayStation 2 (as *MDK2:  
Armageddon*)

Developed in Edmonton  
Published by Interplay  
Entertainment

**WHEN A RUMOR STARTED** going around that the sequel to the platformer *MDK* was up for grabs, BioWare pounced on the opportunity, developing it with Interplay once again publishing, this time for the fledgling Sega Dreamcast.

"At the time, we weren't an RPG studio," says writer Luke Kristjanson. "We had done *Shattered Steel*. *BG I*. And that's it." So why not make an action game?

**MDK2'S TEAM MADE IT UP AS THEY WENT ALONG**

By the time *MDK2* came out in 2000, there were still only a couple of developers in the studio who had made games anywhere else.

"It was a time when as a group we had a diversity of different skills, but no one had ever done it before, really," *MDK2* level artist and designer Casey Hudson says.

So when Casey was asked to "help out" on *MDK2*, he ended up doing everything from level design and audio work to animations for boss deaths.

"You would just jump in," Casey says, "and it was more about trying to see if you could do something, as opposed to knowing what your job is and what you should be doing."

**EVERYTHING BUT THE KITCHEN SINK  
(INCLUDING A TOASTER)**

"Nobody knew what their roles were supposed to be," recalls *Dragon Age* creative director Matt Goldman, who got his start creating environment art

on *MDK2*. "And it was simple enough to do things back then that you were like, 'I'm going to draw this and model it and put it in there and it'll be cool.'"

This is why *MDK2* had, among other things, references to Edmonton, Tommy Tutone, and the legendary, Bakelite-inspired atomic toaster, with a retrofuturistic fifties aesthetic tying it all together.

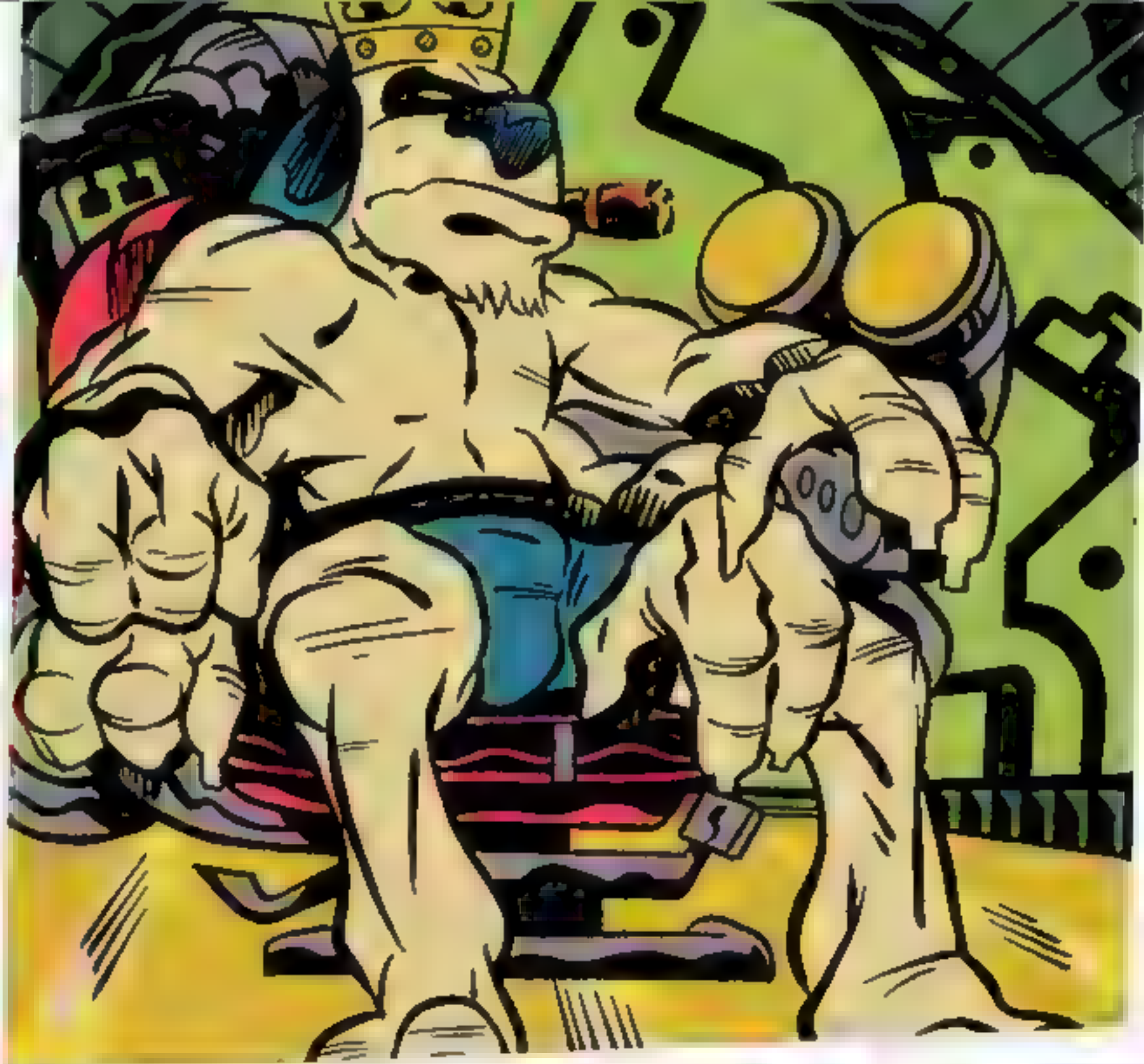
"There was the flying jet powered picnic table jumping puzzle," says Matt, listing off more weird stuff they worked to get in the game. "There was the hydroponic gardens on huge hydraulic arms that were swinging around, and you had to dodge them, and then they punched a hole through a window, and then a space carrot flew out and said, 'Kill meeeee,' right before it was sucked into the depths of outer space."

Not that everything made it in. But it was fun to dream up the wildest ideas and then see how they might fit.

"I still like to work that way," Matt says. In his current role on *Dragon Age*, he takes care to give his creative team a lot of room to play with what could work. "There's a direction, but it needs to be fairly broad," he says. People will come up with impossible ideas. Some may be off note and will need to be scrapped. But other ideas may land perfectly. That's when Matt says you "change the definition of what good looks like to also allow that idea."

That idea then steamrolls into another and suddenly you've got a heck of a unique game on your hands.





#### **EVEN GREG ZESCHUK'S OFFICE RAMBLINGS MADE IT IN THE GAME**

The writing in *MDK2* was a lot of in-jokes. "And Greg's stream-of-consciousness ramblings," Luke says. "Greg would just wander the office and just make up poetry and shit 'cause why not." A lot of the character names, including Zizzy Ballooba and Schwang Schwing, were named for stuff Greg Zeschuk just said that somehow fit.

#### **MDK2 LAUNCHED FIRST ON SEGA DREAMCAST**

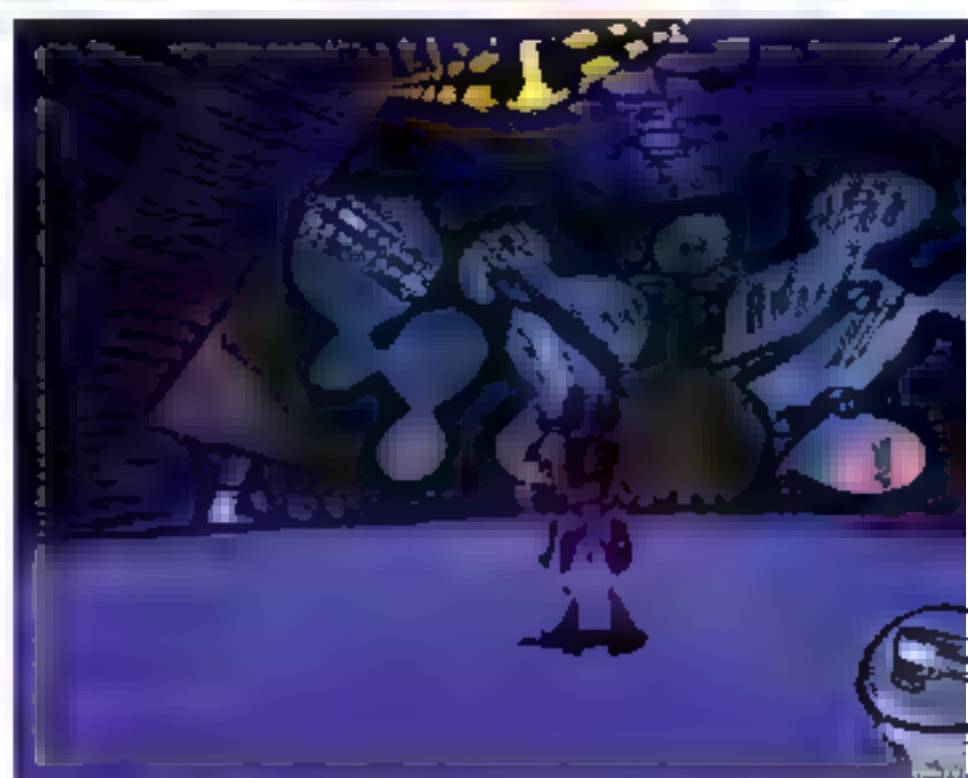
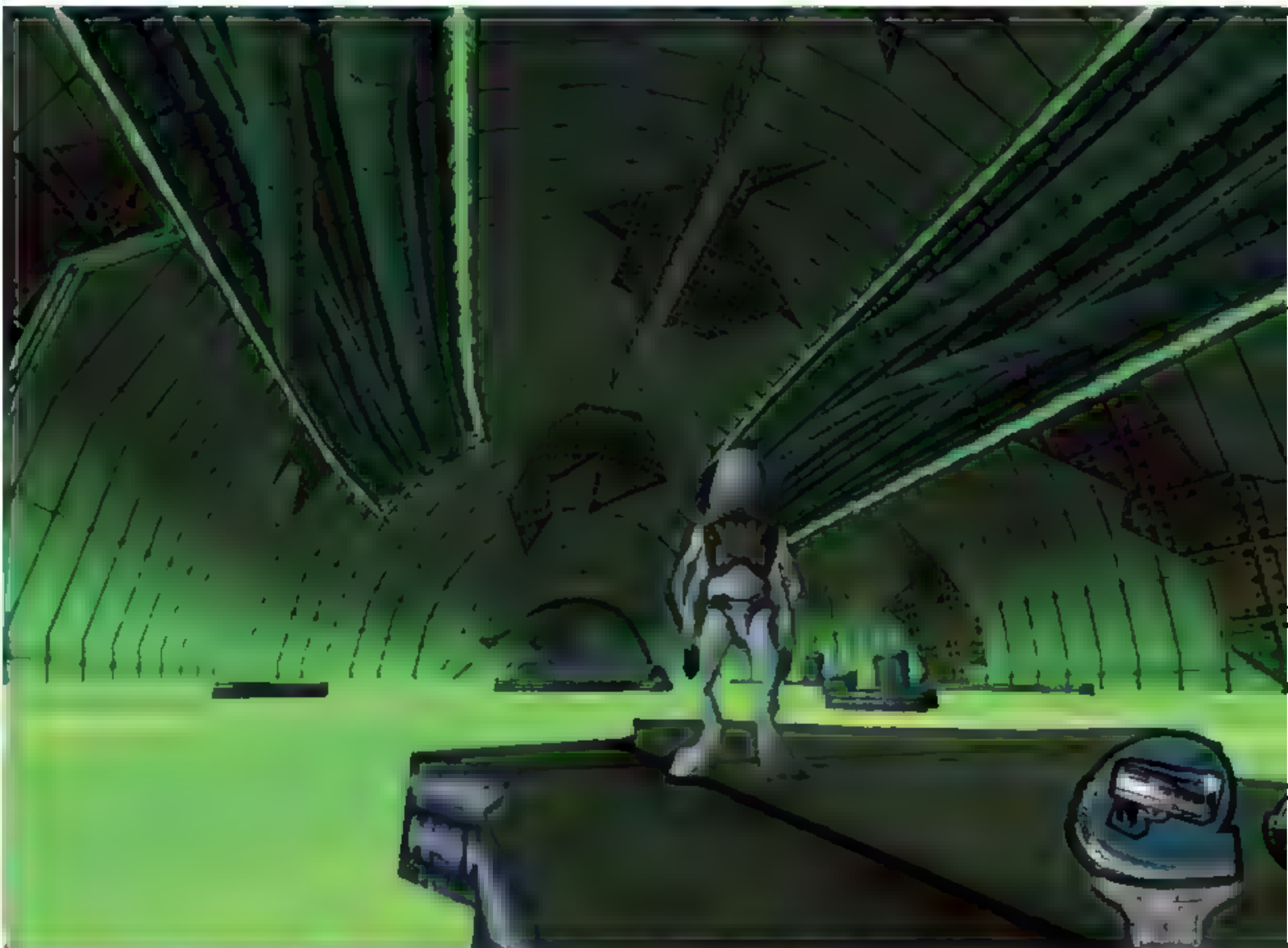
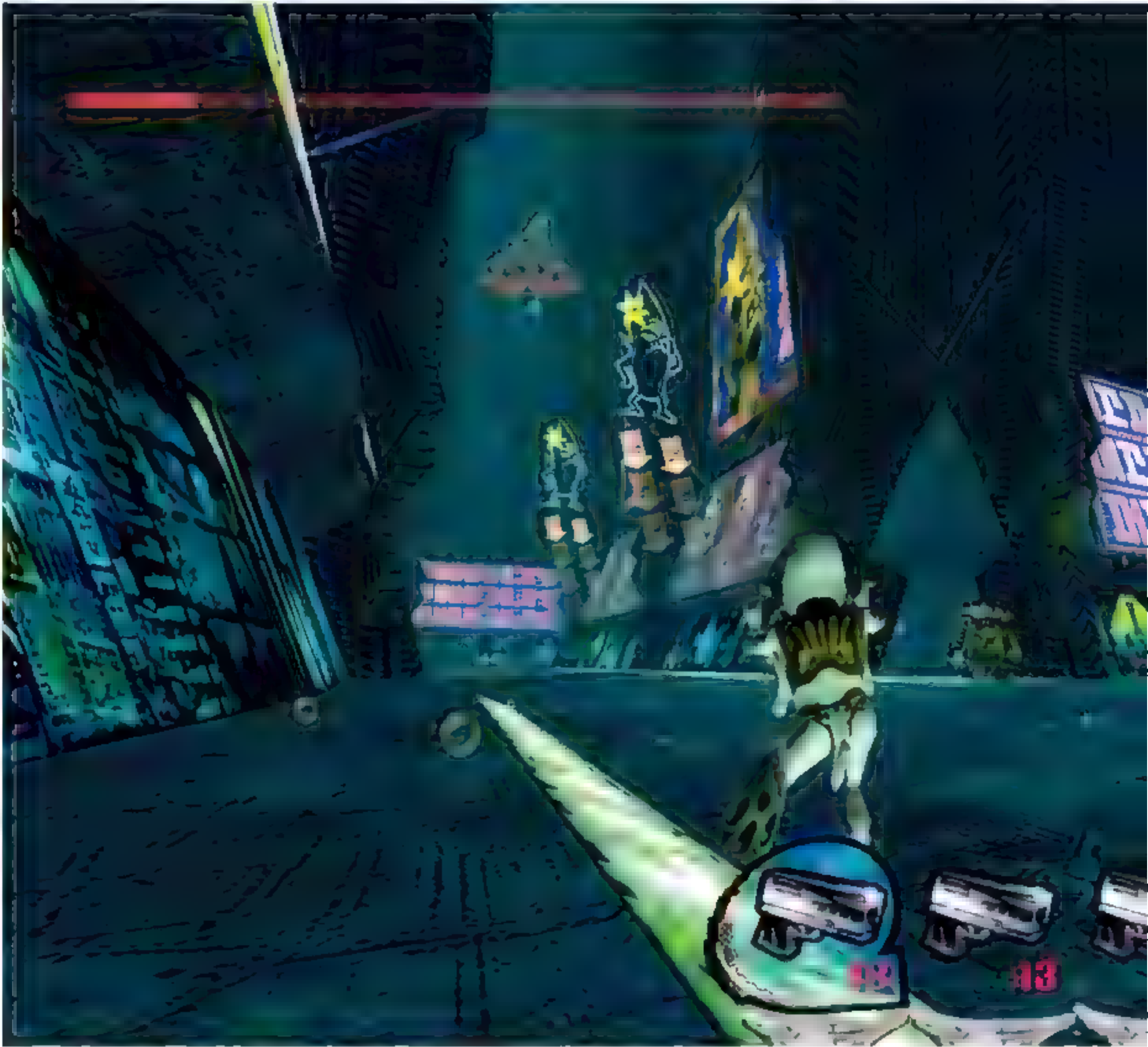
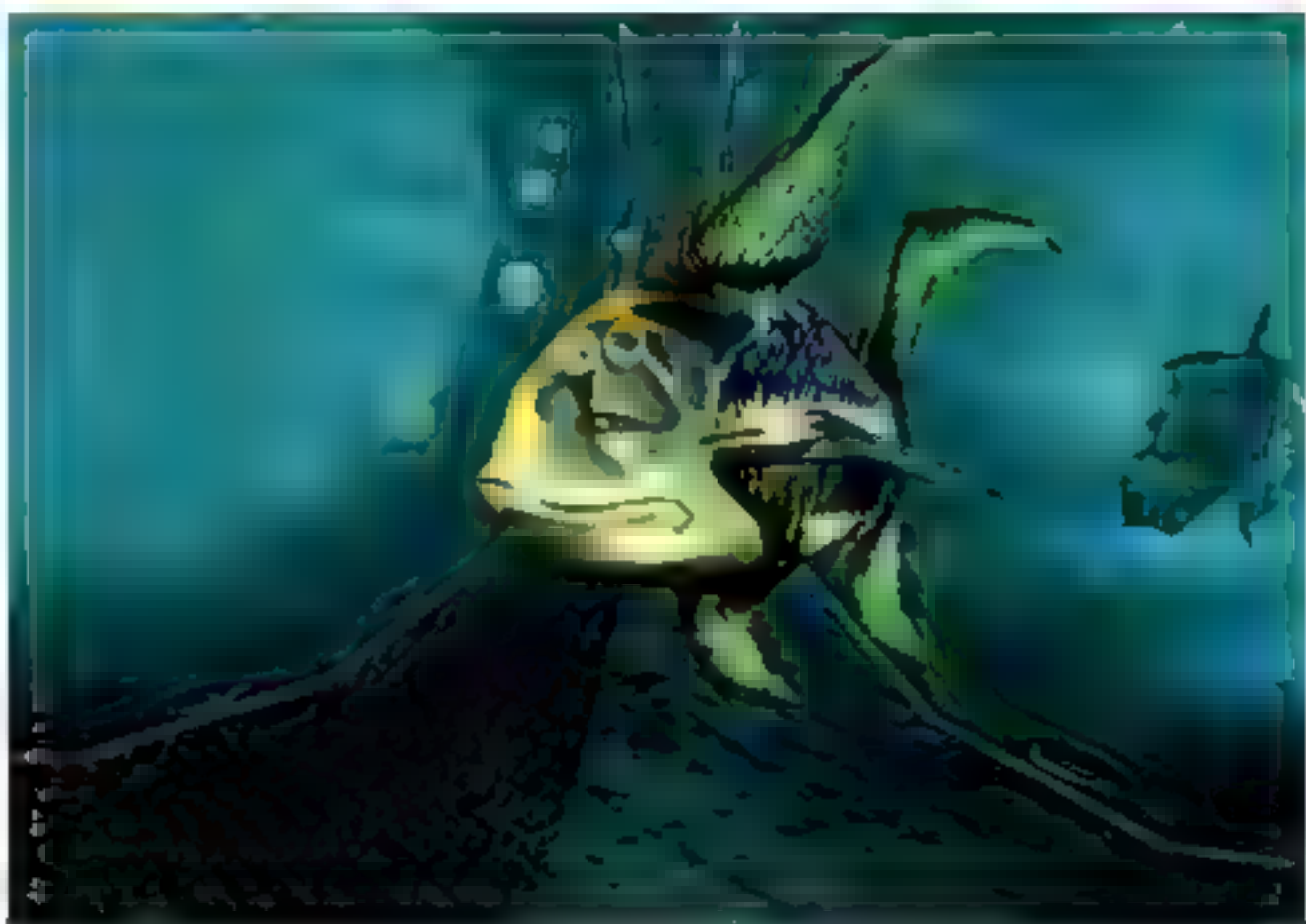
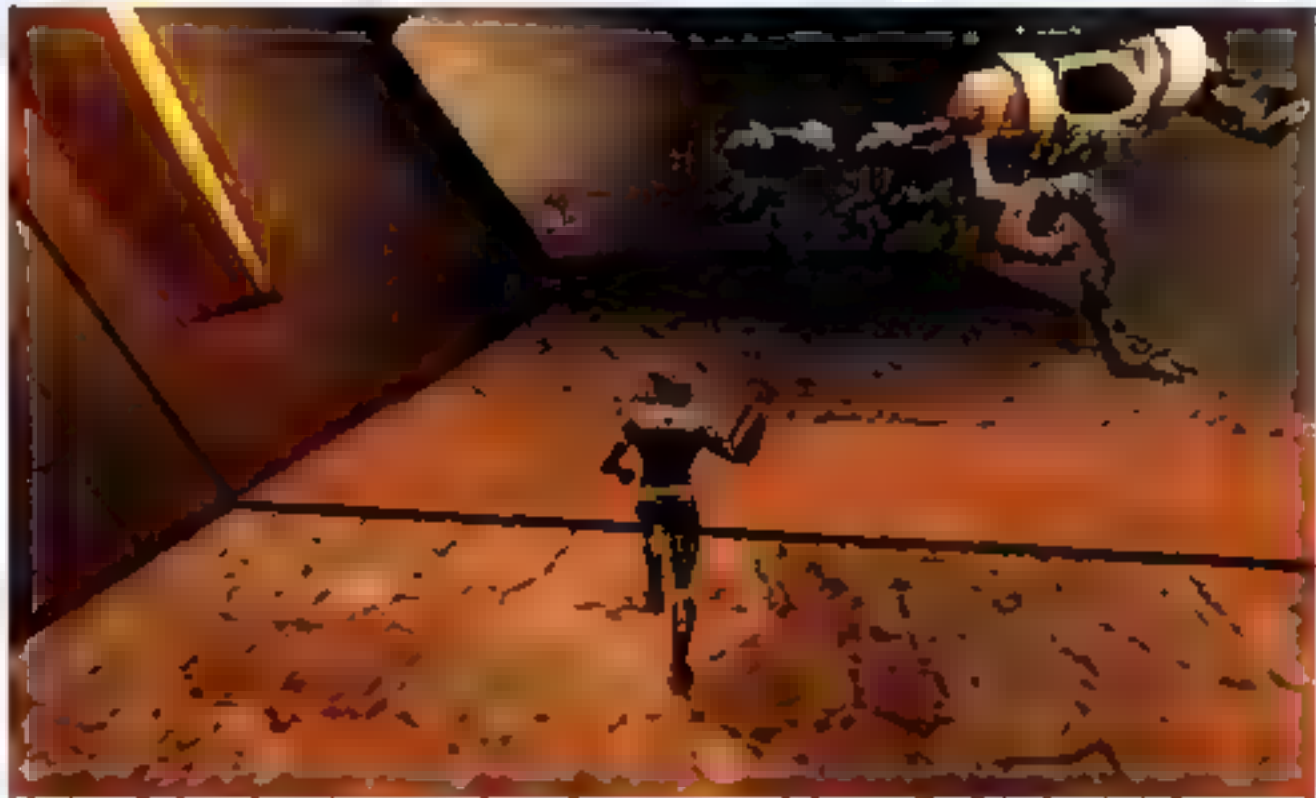
*MDK2* was BioWare's first console game and their only game for the Dreamcast.

"*MDK2* shipped rock solid," Trent Oster says. "The team was able to do that because it wasn't a PC. You didn't have variable memory. You didn't have all these other things happening. And the Dreamcast was actually a decent platform to develop for, for its time. Decent documentation. It just never really succeeded as a console."

*MDK2* tested the limits of players, if not the limits of the Dreamcast. In all Trent's years playing games, testing *MDK2* was the only time he broke a controller.

"Max is rocket-packing up through this incredibly long bullshit level and you've got to hover near the fuel tank and you've got to do it just right to build up enough fuel that you can make it to the next one," Trent says. "I'd screwed it up and I just squeezed the controller and I leaned into it a little bit. I didn't notice I was leaning into it quite that hard and it went snap and shot the VMU across the room . . . I went and got the VMU, popped it back in, set the controller down, and pretended everything was fine."













"One of the things I learned from MDK2 is that even if there is no creative direction whatsoever, the personalities on the team will give it one," MDK2 artist Matt Goldman says.

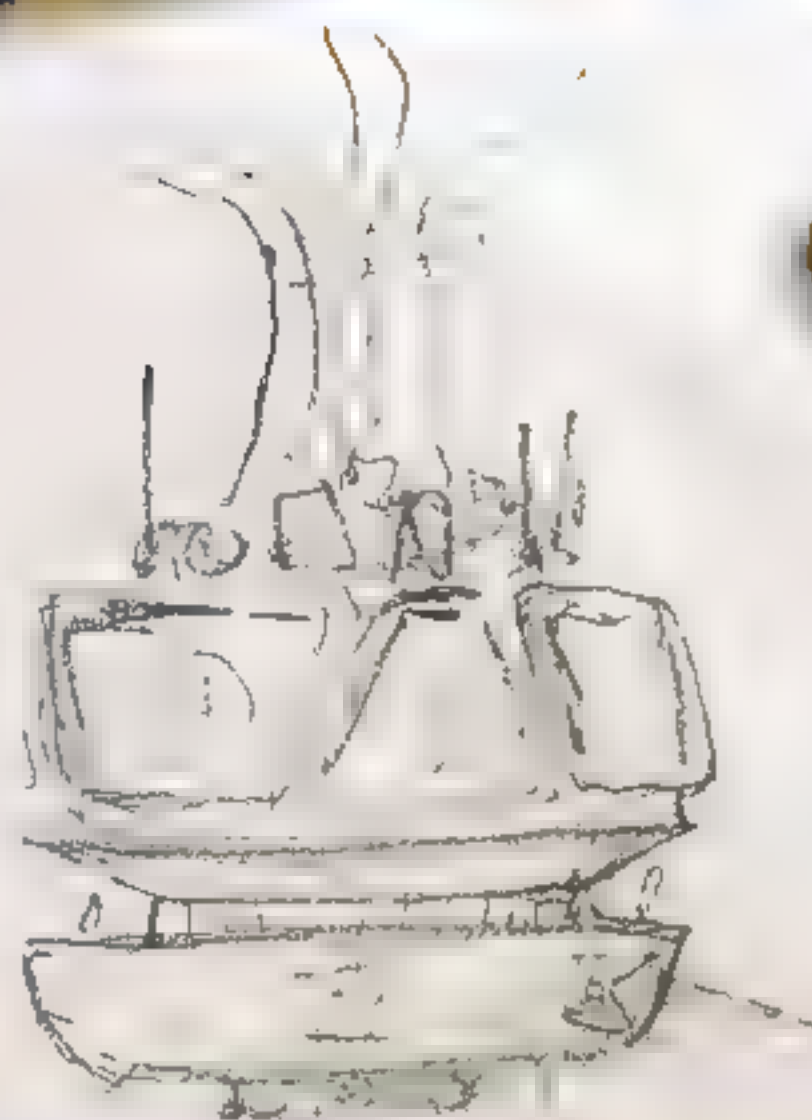
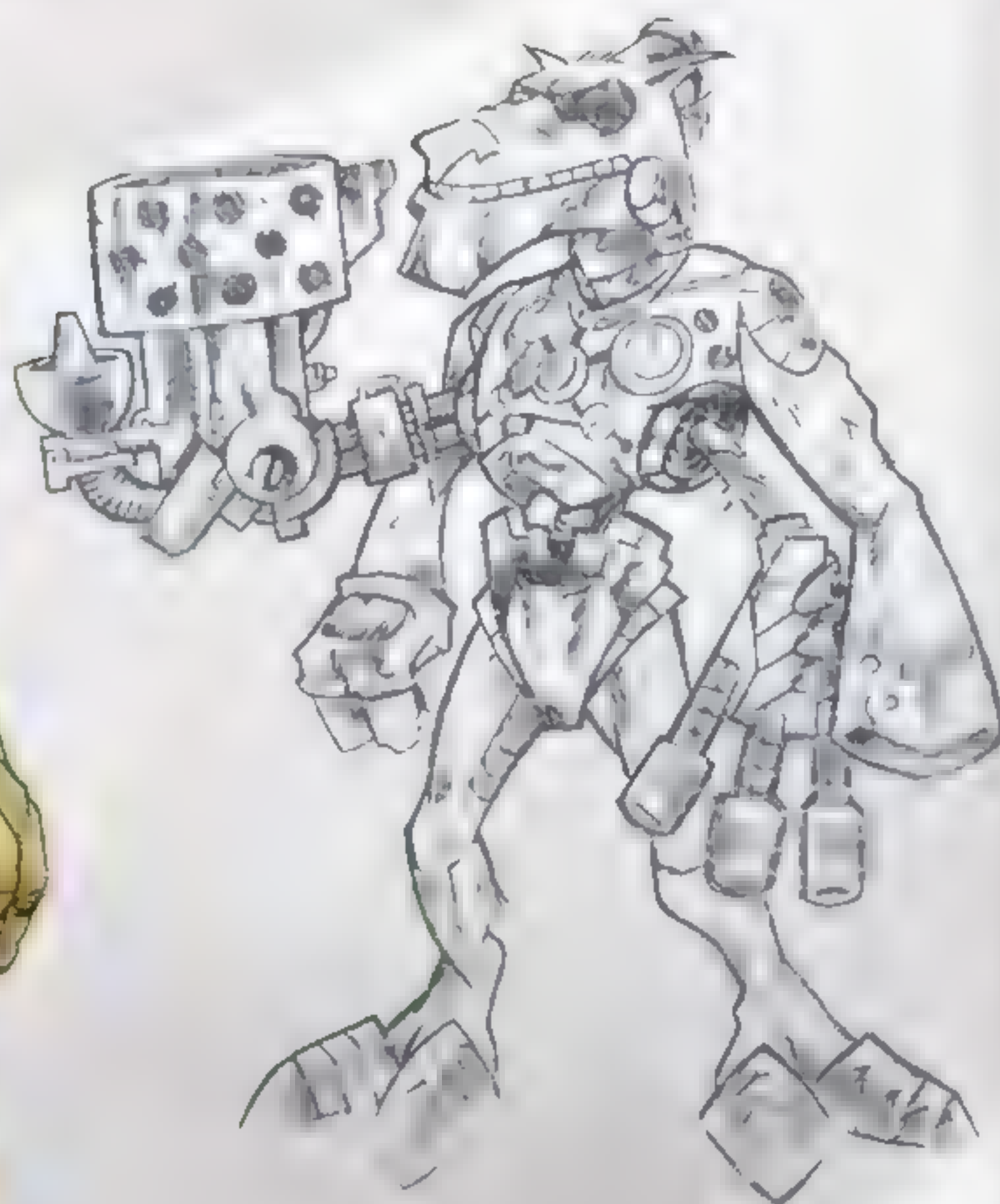
The artists on the project each brought wildly different inspirations. Matt was into 1950s industrial design. Another artist loved Jack Kirby. Yet another was really into camp like Little Shop of Horrors.

"And it turned into something. There was a synthesis," Matt says. "It wasn't planned. We were just totally ad-libbing and having this weird idea jam, and it turned into something. It has a personality. It's a really weird one. But it is kind of endearingly strange, right?"

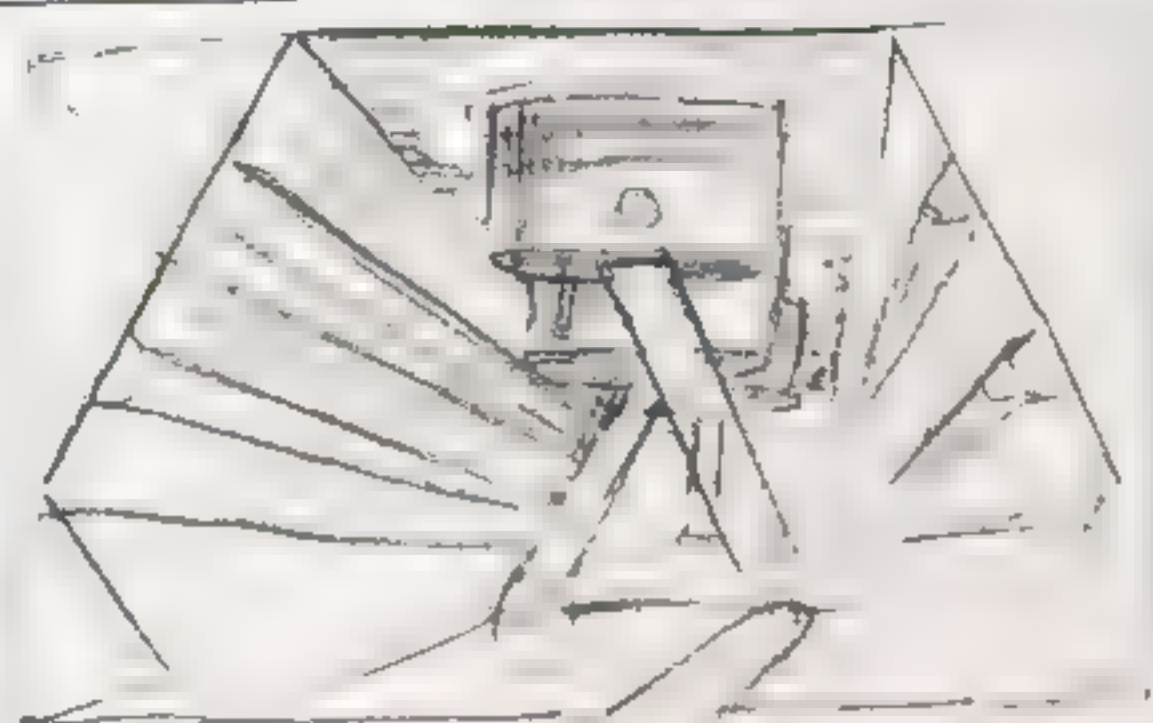




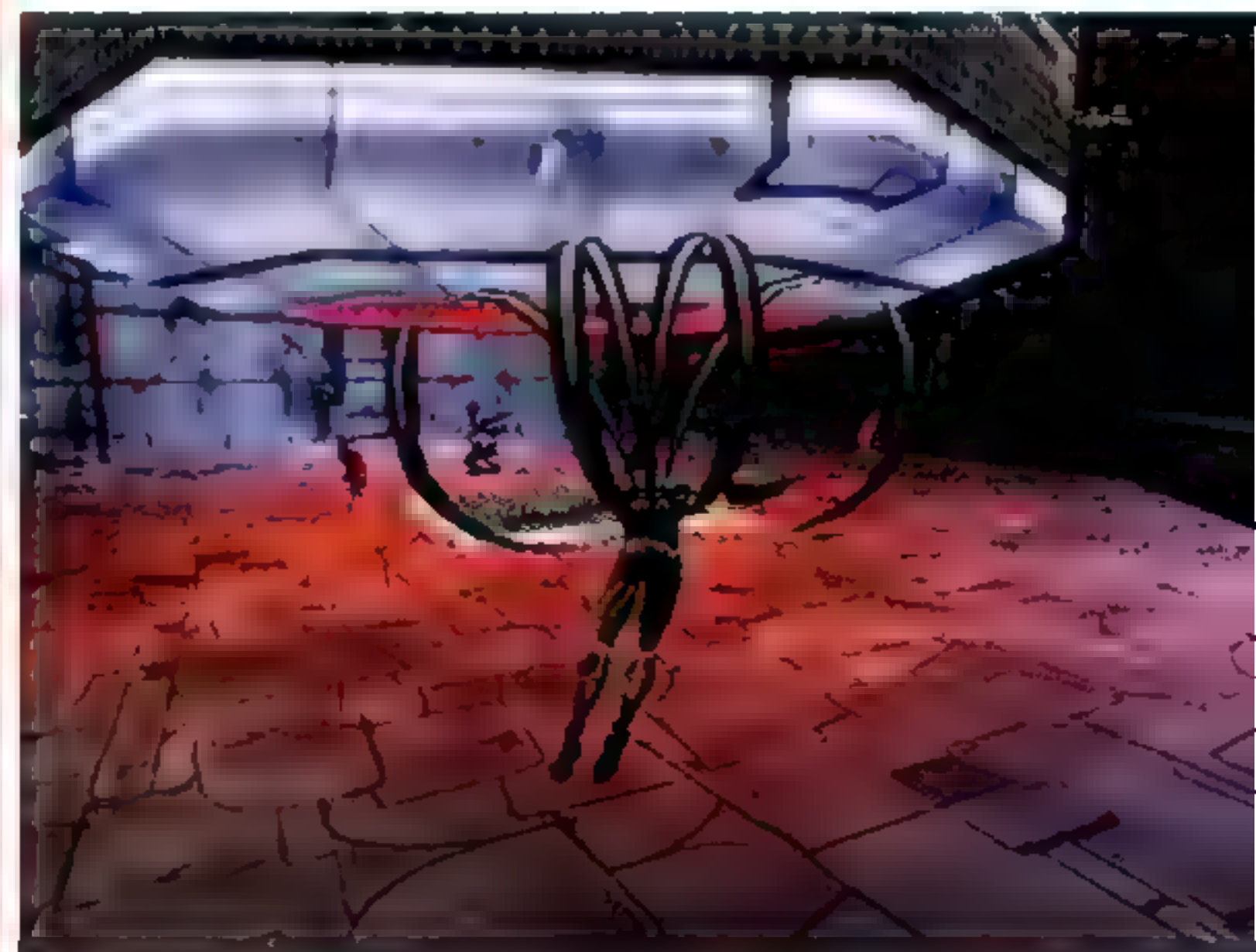




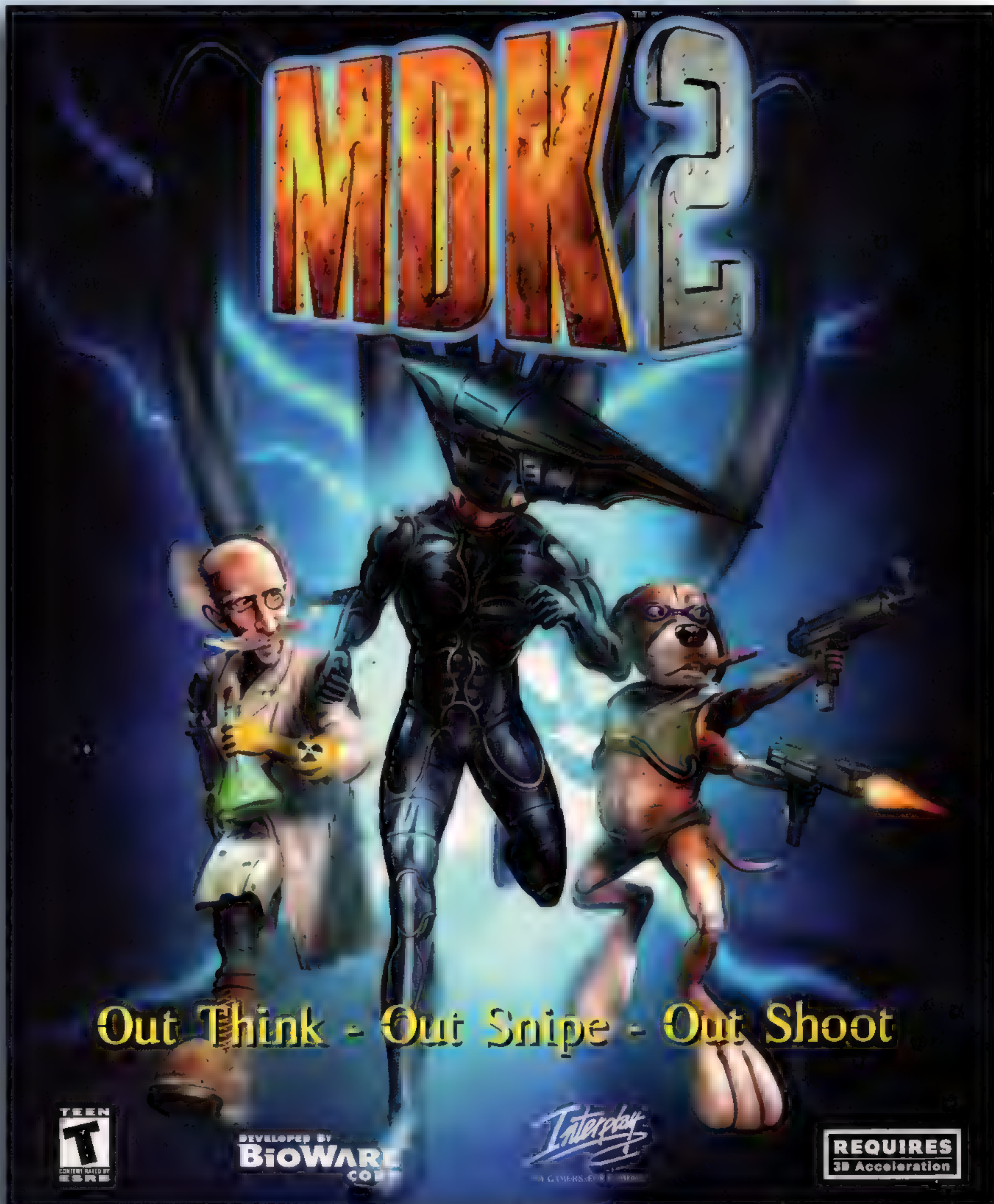
Fury Pump











When *Shattered Steel 2* was shelved, the team and project pivoted to *MDK2*. While the final product may bear little resemblance, *MDK2* and its mech predecessor remain among BioWare's purest action games to date.





## REAL TALES OF DEVELOPMENT: **WHEN THE RIOTS CAME TO BIOWARE**

A RIOT FAMOUSLY BROKE OUT in Edmonton on Canada Day in 2001. A crowd of revelers turned destructive as the bars let out along a five-block stretch of Whyte Avenue, a popular party strip near the university.

According to some reports, as many as 1,500 people took to the avenue, hurling chunks of concrete, rocks, and bottles, smashing windows, and destroying phone booths and bus benches.

BioWare's Edmonton studio just happened to be on Whyte Avenue at the time, recalls art director Derek Watts:

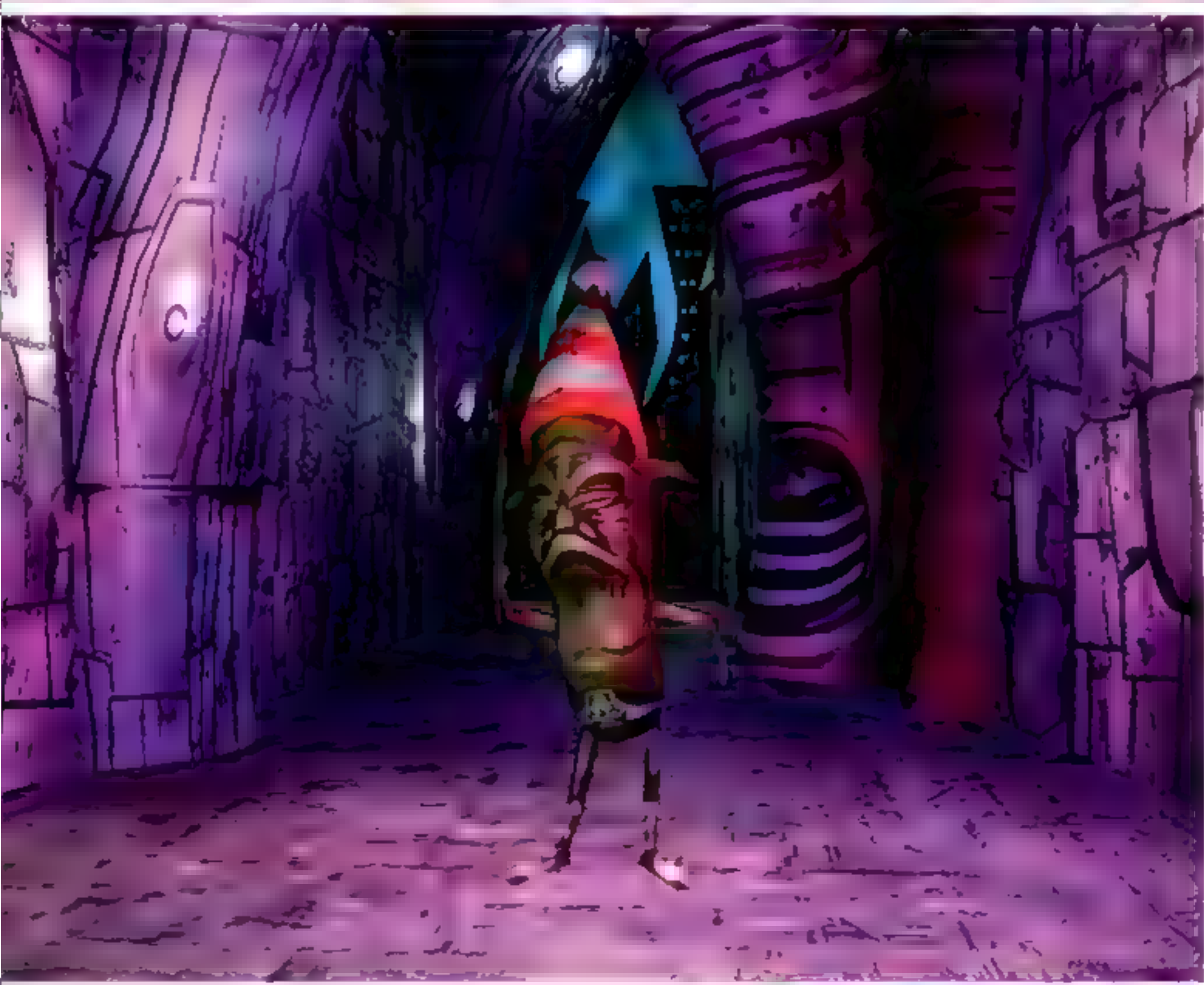
*We'd built this deck that was on the third floor of a building right on the corner above Chapters (a bookstore). The Chapters was the first and second floors and ours was the third and fourth. One of the IT guys decided they were going to go and check on the building, because they were worried somebody might be trying to get in there. They probably also wanted to go to the deck and overlook the riot. It probably looked pretty cool. So, there was a back door that you could go in through the alley. And I think they went in that way and wandered up to the actual office, got in there, and went to look out from the balcony to see what was going on.*

*To their surprise, there were dozens and dozens of people standing up on that balcony. They must have climbed up the side of the building and jumped up there somehow. There were lower buildings that connected to it. He started freaking out, like what happens if these people started to vandalize those windows and get into the office? Luckily nobody got in and they eventually all kinda crawled back down off the building. And BioWare survived another threat to the survival of video games in Edmonton.*

*"As a group, we had a diversity of different skills, but no one had ever done it before, really," says Casey Hudson, who has credits in level design, art, and additional programming for MDK2. "So it was just like: Hey, wouldn't it be cool if you could do this? I think it's possible. Let me try it!"*







Mass Effect is a picture for Bioware in respect but it made sense at the time. For starters, it was a fun way to get into the industry and building a reputation meant taking on opportunities where they could grow from. As a result, Mass Effect that did end down on the ground seemed like a natural fit. Bioware isometric RPG and the new shooter became better.







## GOOD GRAVY!

### MDK2 LINES BEFORE AND AFTER REVISIONS

LIKE ALL WRITING, good video game words are hard to get right on the first try. It takes iteration, editing, polish, and a heck of a lot of spitballing to find just the right way to say the silliest things. Here are some memorable MDK2 line edits.

#### EDMONTON EXCLAMATIONS!

**Doc:** 65 . . . Good Lord that's Edmonton!

**Doc:** 85 . . . My goodness! That's Edmonton!

**Alt: Doc:** 85 . . . Good Gravy! That's Edmonton!

#### TIMING IS IMPORTANT

**Doc:** You there! This is your last warning. Get off my ship!

**Doc:** You there! Bulbocranial alien interloper, get off my ship!

**Alt: Doc:** You there! Get off my ship you Bulbocranial freak!

#### "BRITCHES" IS FUNNIER

**Kurt:** What thing?

**Max:** That Schwang thing!

**Max:** Big guy. Schwang, I think.

**Kurt:** Schwang Thing? I have no idea. All I remember was Waking up and I'm strapped half-naked to steel gurney. Humiliating!

**Kurt:** Must have been the same one that got me. At least you didn't wake up stripped to your britches on a steel gurney. Embarrassing.

**Max:** No, SCHWANG-SCHWING!

**Max:** Too much information, Kurt. Don't go there.

**Alt: Max:** Kurt, I didn't need to know that.

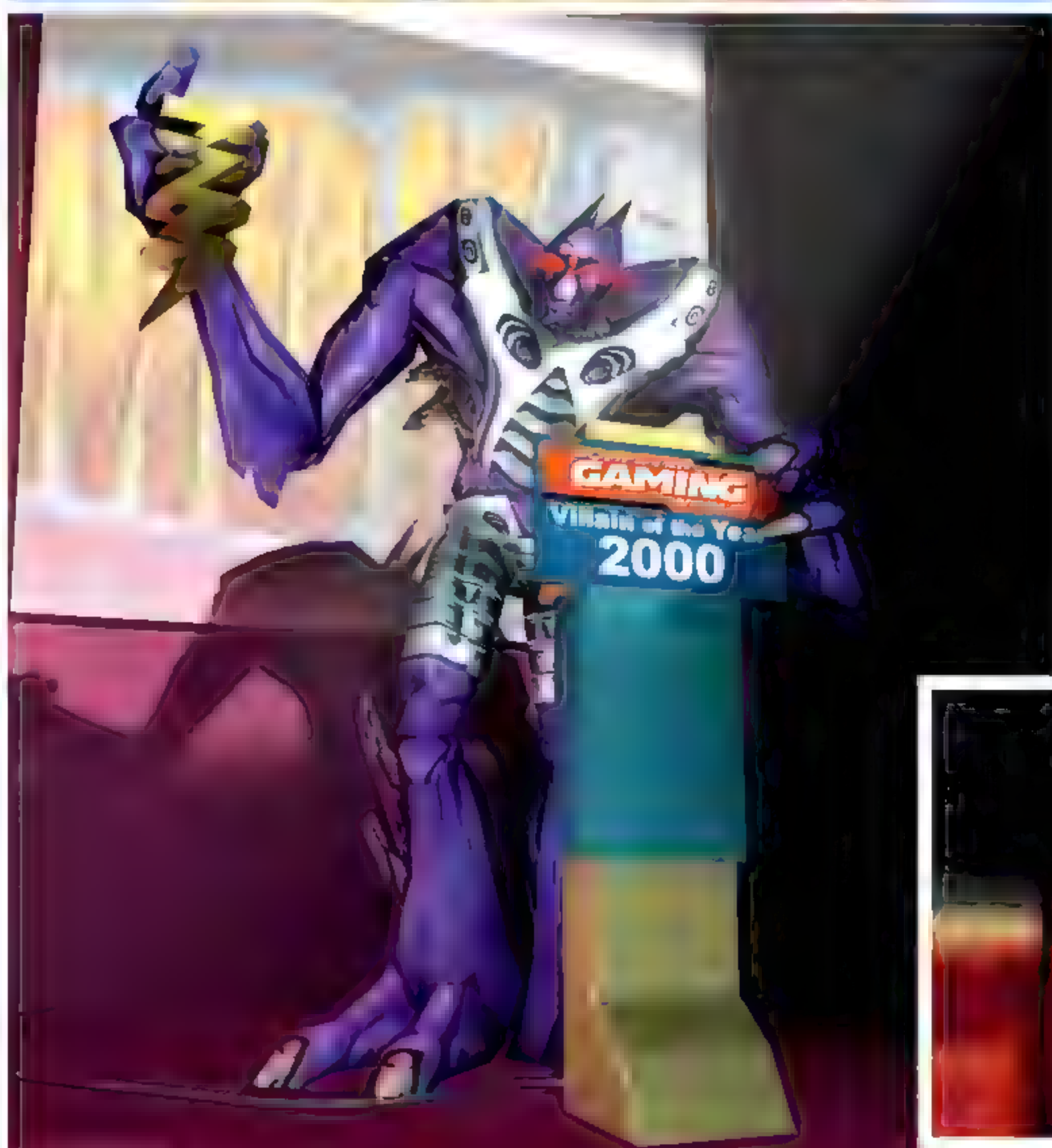
#### SCHWANG SLANG

**Schwang:** \*Ahem\* Yes, well, soon you won't have to worry about anyone setting foot there ever again.

**Schwang:** Too little, too late.

**Schwang:** Too little, too late. The Device is set and in two minutes, it be off, up out, and all over your Earth. Whaddya say to that, Fleabag?

**Schwang:** The Device is set and in two minutes, it be off, up out, and all over your Earth. Whaddya say to that, Fleabag?





IND.

# Cosmic

## TALES

APPROVED  
BY THE  
COMICS  
DEPT  
AUTHORITY

12¢

11  
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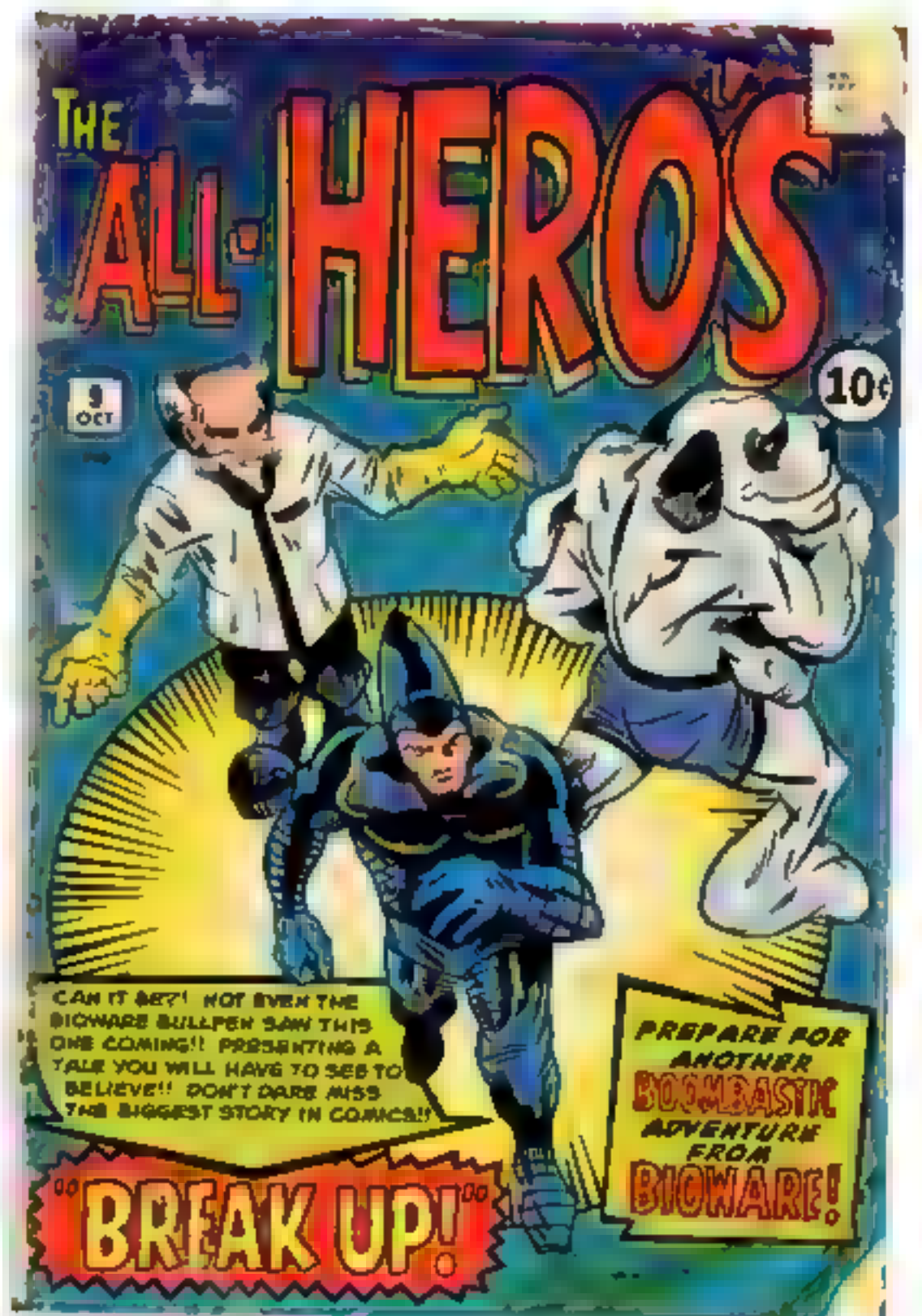
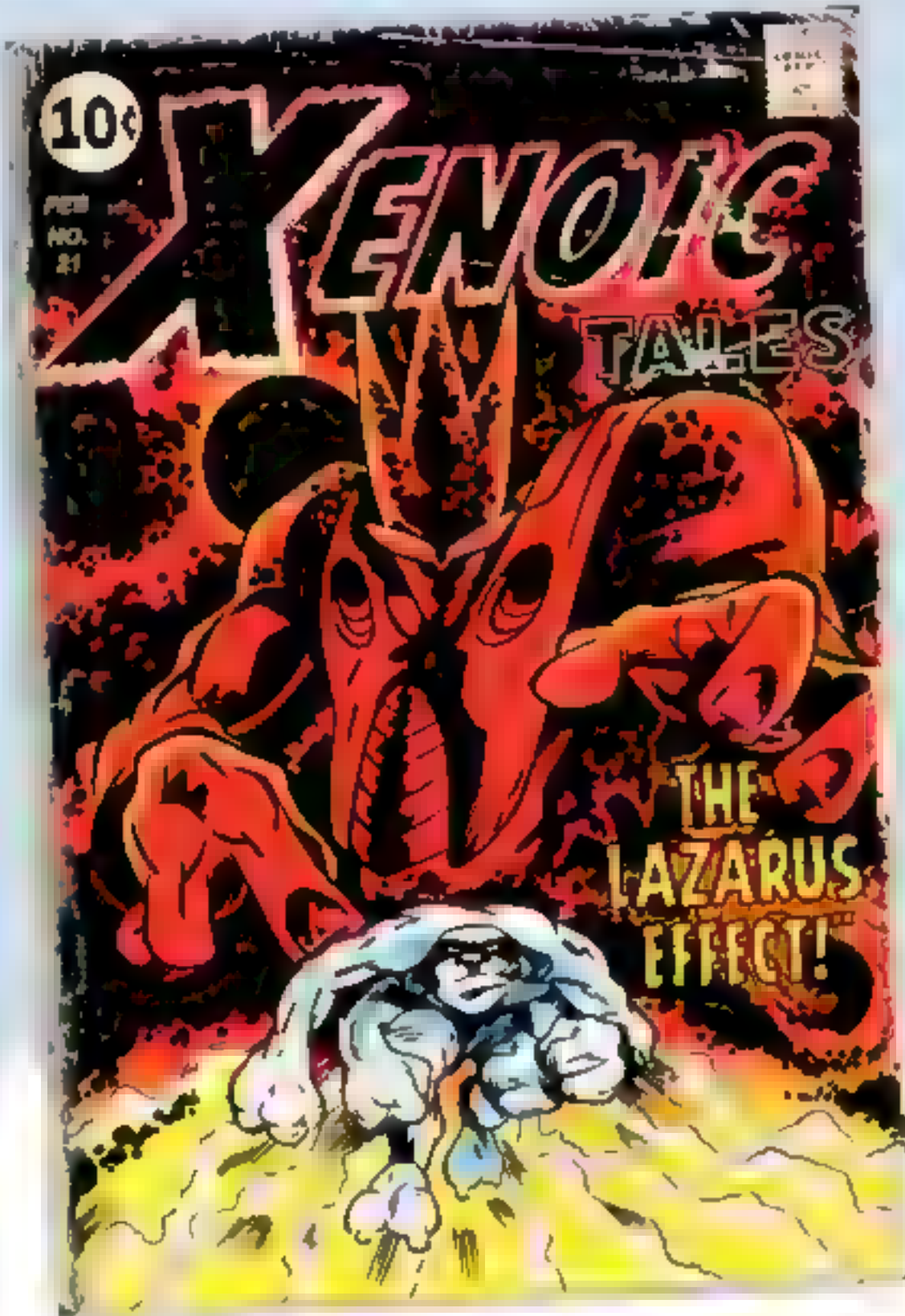
**FEATURING**  
**"KURT HECTIC!"**  
**"MAX THE DOG!"**  
**"DR. FLUKE HAWKINS!"**  
 SEE THEM FIGHT  
 TOGETHER AGAINST  
**"ZIZZY BALLOOBBA!"**



MDK2 mashed up futuristic science fiction with a retro aesthetic. Each level in the game was given a cover art treatment inspired by the Golden Age of comic books. These covers by artist Sean Smalles appeared in the loading screens between each mission.

Large posters were made of favorite covers, which were hung in a BioWare Edmonton meeting room named after the game, along with a display case housing a pristine MDK2 toaster.









## MDK2'S ATOMIC TOASTER

BECAUSE WHY NOT?

IT'S CUSTOMARY FOR a development team to receive gifts from the studio to celebrate the completion of a project.

These gifts are typically ornamental. Sentimental. A framed game disc with cover art and a plaque. Maybe a commemorative medallion.

*MDK2* was not your typical project. When BioWare shipped the absurd run-and-gun sequel in 2000, the team got toasters. Atomic toasters like the ones in the game. Not exactly like the ones in the game, mind you. These toasters didn't irradiate toast, then send it bouncing around the room. These toasters mostly just matched the fifties aesthetic of the game and had an *MDK2* logo on the side.

"I still use that thing every day," says *Dragon Age* creative director Matt Goldman, who began his career doing art for *MDK2*. "Every day, I think about *MDK2* for a second when I make my toast or when I make a crumpet."

Matt has kept his toaster running for twenty years now. He refuses to get a new one. When it breaks, and it does break, he takes it apart and fixes it.

"It's actually not a great toaster," Matt says.



...from an impromptu *MDK2* re-creation. Whyte Avenue's crowded barroom came alive with hearty toasts that celebrated *MDK2* with the maximum of clinking glasses and the squaring of a development PC.





## REAL TALES OF DEVELOPMENT: ELEGY FOR A FLAT WORKING SURFACE

**IN THE EARLY YEARS OF** BioWare, it was a rite of passage for new employees to build their own desks.

"Day one. There it is. Just an IKEA box on the floor," writer Jay Watamaniuk says. "It gave you some ownership."

Assuming you were lucky enough to get a desk. "The first table I worked on was a banquet table. For two years," animator Steve Gilmour says. Those early years were a bit improvised. On his first day at the company, Steve remembers it was Trent Oster who set up his computer, or as Steve describes it: "This giant man sweating in a room that was covered with computer components."

Writer Luke Kristjanson used his desk for twenty-three years. It survived the move from Whyte Avenue to the Calgary Trail office, but sadly didn't make the trip to EPCOR Tower:

*Those early days, we didn't know a lot of things, least of all, how to be a company. For a lot of years, we were just a growing collection of new friends. Which is probably why so many game studios flame out. Friends are often shitty bosses. But back then, we didn't care. Welcome to the weird club, here's a screwdriver, build your desk. And I did.*

*Mine was black instead of the more typical brown of the day. It had a rounded front edge, covered in a sticker of fake wood. All the others eventually shredded and peeled. But not this one. So I kept it. Easy in those days, you moved your own shit. Then*

*we got bigger, got dedicated facilities people. And I still kept it.*

*Is it ergonomic? No, pretty bad, actually. Is it adjustable? Depends what you shove under it. So why should it be moved, it weighs a crap ton. Well, it's got those old-school holes for cables. I like that. Oh, I use cinder blocks as monitor stands, so maybe you don't want another desk scratched to hell? Also, why not?*

*Kelly [Wambold] in IT made it his personal mission to keep it. And after he left, I just whined about it. We hired people to move stuff anyway; nobody spindly is breaking their back on the thing.*

*It lasted until the move to the new building downtown. Shiny and new, full of identical white planes that raise and lower by what I assume is the darkest ergomagic. They're carefully spaced and plugged in. You have to swap when you change offices. The old desk couldn't come, couldn't endlessly shoulder its way between these monuments of efficiency. I took its measure and measurements. No room at home. No room at the inn. After twenty-three years I bid my farewell, turned out the lights, and turned my back on it. Though I'm not really sure of the order.*

*It had seen things you people wouldn't believe. But nothing was lost. It's all in the games.*

*And it's fine. It retired to a farm and opened a bar. It solves crimes. Shut up, it's raining.*

## TIMELINE OF BIOWARE EDMONTON STUDIOS

BECAUSE YOU CAN'T FIT 400 PEOPLE  
IN GREG'S BASEMENT

**AS BIOWARE GREW** from an initial team of four working in Greg's basement to legions in multiple countries, it was necessary to find bigger studios to house ballooning rosters of devs. Here is a rough timeline of BioWare's locations.

### BIOWARE EDMONTON

- **1995:**  
Greg Zeschuk's basement
- **1995–1996:**  
Second-floor walkup above bicycle shop in Garneau neighborhood
- **1996–2004:**  
Multiple floors above bookstore on Whyte Avenue
- **2004–2019:**  
Multiple floors in the Terrace Office Tower, attached to a Calgary Trail hotel
- **2019–Present:**  
Multiple floors in EPCOR building downtown







## WORK SHOWERS, INTERCOMS, AND SCREAM ROOMS

THE STORIED PERIOD WHEN BIOWARE WAS ABOVE A BOOKSTORE ON WHYTE AVENUE

**"WE HAD A POWER OUTAGE AND WENT TO FLIP THE MAIN BREAKER, AND THE TRANSFORMER WAS SO HOT, WE ACTUALLY FRIED AN EGG ON IT. I WAS ALWAYS STICKING MY HEAD IN THE CEILING . . . FIGURING OUT WAYS HOW TO KEEP EVERYBODY WORKING."**

—RICHARD IWANIUK,  
SENIOR DIRECTOR OF BUSINESS  
PLANNING AND DEVELOPMENT

IN 1996, BIOWARE WAS READY to expand. A lot. Multiple games were in production. *Shattered Steel* was coming in hot like a missile. *Baldur's Gate* development was ready to explode, also like a missile, but this time a magic one.

BioWare needed a space that fit more than twelve people. Something more comfortable than their rickety Garneau spot with the on-again, off-again power supply.

Ray Muzyka and Greg Zeschuk found their ideal space: an office they could grow into above a bookstore on Whyte Avenue, a bustling strip of bars and shops near the University of Alberta.

At first, BioWare's new location was limited to just a handful of rooms on the third floor.

"It was a normal, plain-white-wall-type office and was not yet strained by having too many game designer bodies in it," recalls writer Luke Kristjanson. "It certainly was a hallway with a bunch of rooms off it. And a shower. The shower would eventually hold unused copies of *Baldur's Gate* and *Tales of the Sword Coast*."

The longer the studio stayed in the building, the more of it they annexed. Every time someone moved out, Greg's dad, Ed Zeschuk, knocked another hole in the wall.

"We were a privately run developer. And when we were expanding, it was out of a desperate need for space . . . In a lot of instances, we would literally blow a hole in the wall and continue on," senior director of business planning and development

Richard Iwaniuk says. "There were always five or six different color schemes."

Working on Whyte Avenue had plenty of perks. There were good places to grab lunch. It was near the city's river valley park system. Company meetings were even held in the nearby Princess Theatre, a cushy heritage cinema a couple of blocks from the studio.

But BioWare's office itself was kind of a nightmare.

### THE HAMSTER TRAIL HEATING SYSTEM

Between the computers and dev kits, BioWare was pulling massive amounts of power into the building, and because the building was on the older side, there wasn't a good system for keeping things climate controlled.

"We had a power outage and went to flip the main breaker, and the transformer was so hot, we actually fried an egg on it," Richard says. He tried all kinds of things to keep the office cool enough to support human life. "I was always sticking my head in the ceiling . . . figuring out ways how to keep everybody working." At one point, they vented excess hot air into the space between the ceiling and drop tiles. When that didn't work, "IT actually taped together yards and yards and yards of recycled blue bags into the one room that had extra cooling," Richard says. "We basically created a hamster trail of blue bags into the other areas on the third floor that didn't have enough cooling."

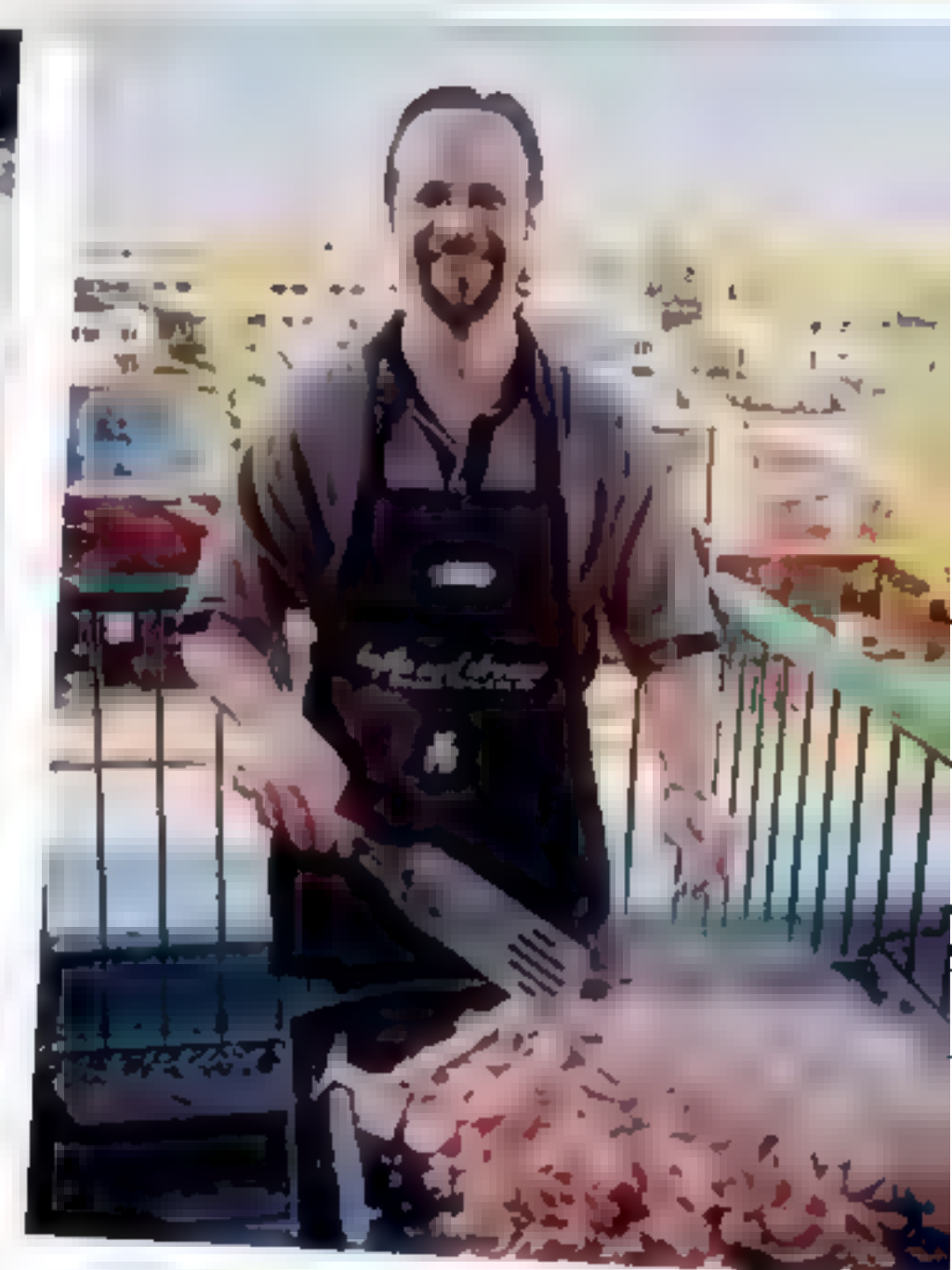
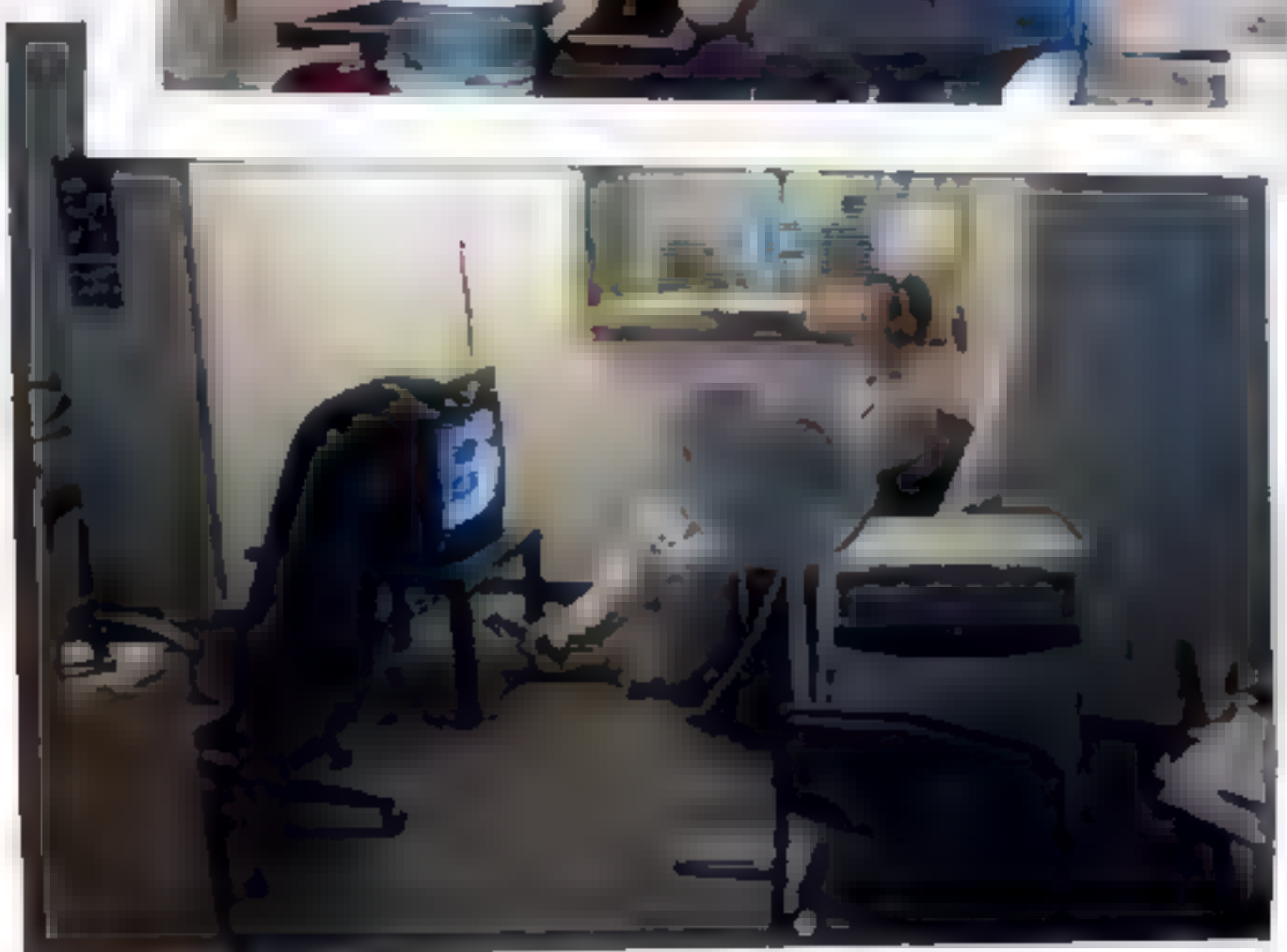
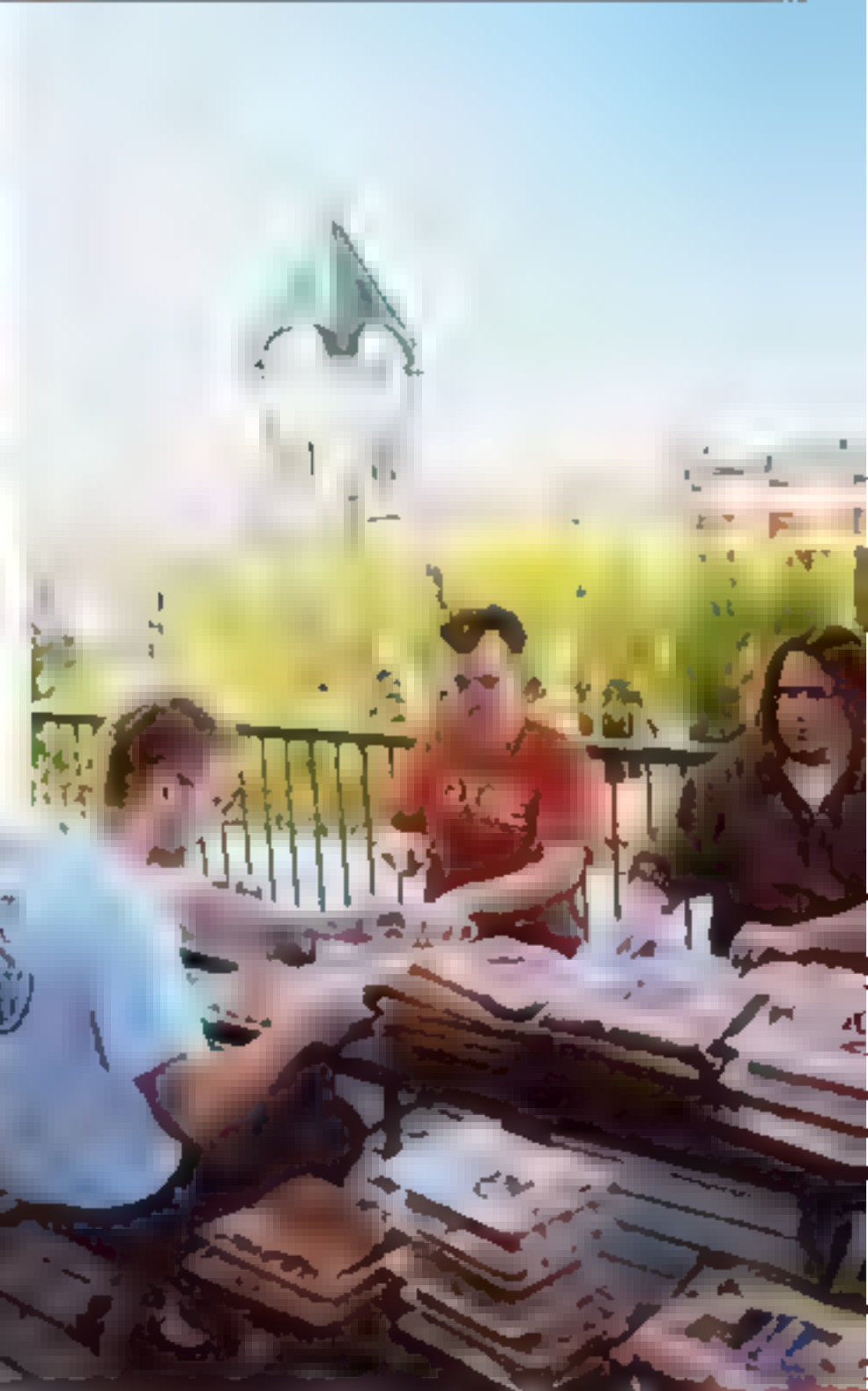
It was a period of all-out war against the heat, especially in the summer.



After moving the studio to Whyte Avenue, Ray and Greg initially had fairly large offices. "Quite palatial" is how Ray describes them, with side tables and extra seating for meetings.

As the development team grew, the cofounders' workspace was compressed more and more, eventually to a basic desk for each of them. "And a couple crammed-in chairs for impromptu meetings as we collectively ran out of room in the Whyte Avenue space," Ray says.

"Greg and I decided at some point that we would always share an office since everyone else had to share one too . . . and we continued that tradition from that point onward even in the next office building."



Ray would often run to the store to buy armfuls of frozen treats.

"I would get bags and bags of Popsicles and Fudgsicles and just hand them out to people," he says. "I was worried about them as a doctor."

#### THE SCREAM ROOM

When BioWare first moved into the Whyte Avenue location, they shared a floor with psychological services. One of those services was scream therapy, where patients would yell and scream in the safety of a room with double-thick, soundproof walls.

When the therapy moved out, BioWare moved in, and the Scream Room became Ray and Richard's office, who was finance director at the time. The Scream Room doubled as a good place to have sensitive conversations about NDA'd plans and the like.

#### THE PARKADE

The parking garage below the studio went down five levels. But it was built so that it was one lane wide. "You absolutely would not fit two cars," writer Jay Watamaniuk says.

"You had to honk and flash your lights so you wouldn't hit anyone coming the other way."

And if oncoming traffic didn't get you, the automatic door did.

One day, the sensor on the door failed as Jay was driving out of the parkade. "I'm driving my 1984 Oldsmobile" (which Jay bought for \$375 from his grandma).

The door came down on the front of his car. When he tried to back up, fearing at worst a scratch, the door instead ripped the front off his car: the entire grille and a couple of inches behind it.

Jay says he had to duct-tape the hood back on.

#### THE INTERCOM

Before there was "reply all" email, BioWare had a "reply all" intercom. Everyone had access to a studio-wide intercom system at their desks. This was supposed to be reserved for essential communication.

"The way the phone system worked, anybody from any phone could use the overhead page," former studio general manager Aaryn Flynn says. "Occasionally people would use it for straight-up pranks." They would page fake or funny names. Have entire conversations over the intercom system, which could sometimes prove necessary when coupled with the office's cooling issues.

"There was an email that went out one time that basically said: 'Don't come into my office. It's 30°C in my office, and I'm not wearing any pants,'" programmer Owen Borstad says. "That was followed about thirty seconds later by a page that said: 'No, seriously, guys. He's serious. He's not wearing any pants. Please, for the love of god don't come in.'"

"The entire office was boxes and random stuff everywhere," writer Jay Watamaniuk says. "We had our pretty meeting room that we would take important people into near the front desk, and then the rest of it was kind of a bit more primal."







THE MAKING OF

# Baldur's Gate II

## Shadows of Amn

### THE CLASSIC GAME MADE OF CHEWING GUM



#### KEY FACTS BALDUR'S GATE II: SHADOWS OF AMN

##### RELEASE DATE

September 21, 2000

##### GENRE:

RPG

##### PLATFORMS:

Windows, Mac OS

##### EXPANSION CONTENT:

*Throne of Bhaal*

Developed in Edmonton

Published by Black  
Isle Studios (division of  
Interplay Entertainment)

**BALDUR'S GATE II: SHADOWS OF AMN**, widely regarded as one of the best role-playing games ever made, was a massive, lumbering exercise in improvisation made by a hyper-young team of game-dev rookies and flailing misfits—but you wouldn't know any of this as a player.

"The key thing about *Baldur's Gate II* was that it was bubble-gum-and-duct-taped together by people who really understood the bubble gum and duct tape," says Trent Oster, an original BioWare developer whose subsequent studio Beamdog released an enhanced version of classic BioWare titles including both *Baldur's Gate* and its sequel.

The *Shadows of Amn* team included many of the core developers from the first game, including concept artist John Gallagher, "evil genius" John Winski, and programmer Scott Greig, who had been contributing key design and code to BioWare's isometric adventures since the *Battleground: Infinity* demo that served as the blueprint for the first *Baldur's Gate*.

#### A BETTER GAME IN EVERY WAY

The small studio that built the original *Baldur's Gate* on the backs of their tabletop know-how took their newfound experience with CRPGs, hired a ton of new people, and ran with a similarly isometric sequel that was bigger in every conceivable way.

"The goal must be to make the game better, and not just to make the same game over again," Ray Muzyka wrote in a Gamasutra postmortem on the game. "You also need a mechanism to quantify your previous mistakes and learn from them. If you don't make a point of figuring out what you did wrong last time, you're not likely to fix it the second time around."

The team outlined fifteen features they wanted out

of the second game, including better graphics, dragons, a death match mode, and character romances.

Complicating matters was the third edition of *Dungeons & Dragons*, which was released midway through *Baldur's Gate II*'s development. *Baldur's Gate II* was based on the second edition.

The new edition added a new sorcerer class, the d20 system, and numerous changes to rules on everything from combining classes to leveling up.

"There's a sorcerer in *Baldur's Gate II* because they wanted us to switch it to third edition," the game's lead programmer, Mark Darrah, says. "We were like: Yeah, noooo. That's impossible. It's held together by gum."

#### IT GREW AND IT GREW

##### UNTIL IT COULD GROW NO MORE

"The only story I ever tell about *BG II* is that it was the worst crunch I ever worked in my life," says writer David Gaider, who has not-so-fond memories of a sofa in BioWare's Whyte Avenue studio where he tried to catch snoozes between overnight writing sessions during the worst of it.

David says he had to work like that. It's not that they made him, but "if I didn't finish what I was writing, the whole plot was going to get cut."

The last three months of the game's development saw many in the studio working seventeen-hour days. Writers like David and Luke Kristjanson, running on fumes after pouring out some 1.2 million words for the game, were in bug-fixing mode, "sympathy crunching" alongside the programmers. *Baldur's Gate II* shipped with around 290 quests—and the team killed some 15,000 bugs to get the game stable enough for release.

"We were terrible at scope control. We just kept adding content," David says. "We literally could





have stopped the game in the Underdark, and it would have been a perfectly acceptable game."

#### AT SOME POINT, IT JUST HAD TO BE FINISHED

By the end, the team was just about ready to kill the game's design and writing director, James Ohlen.

"My designers, and like the whole team, revolted against me," James says, "because I was like: You gotta add more; it's just not big enough."

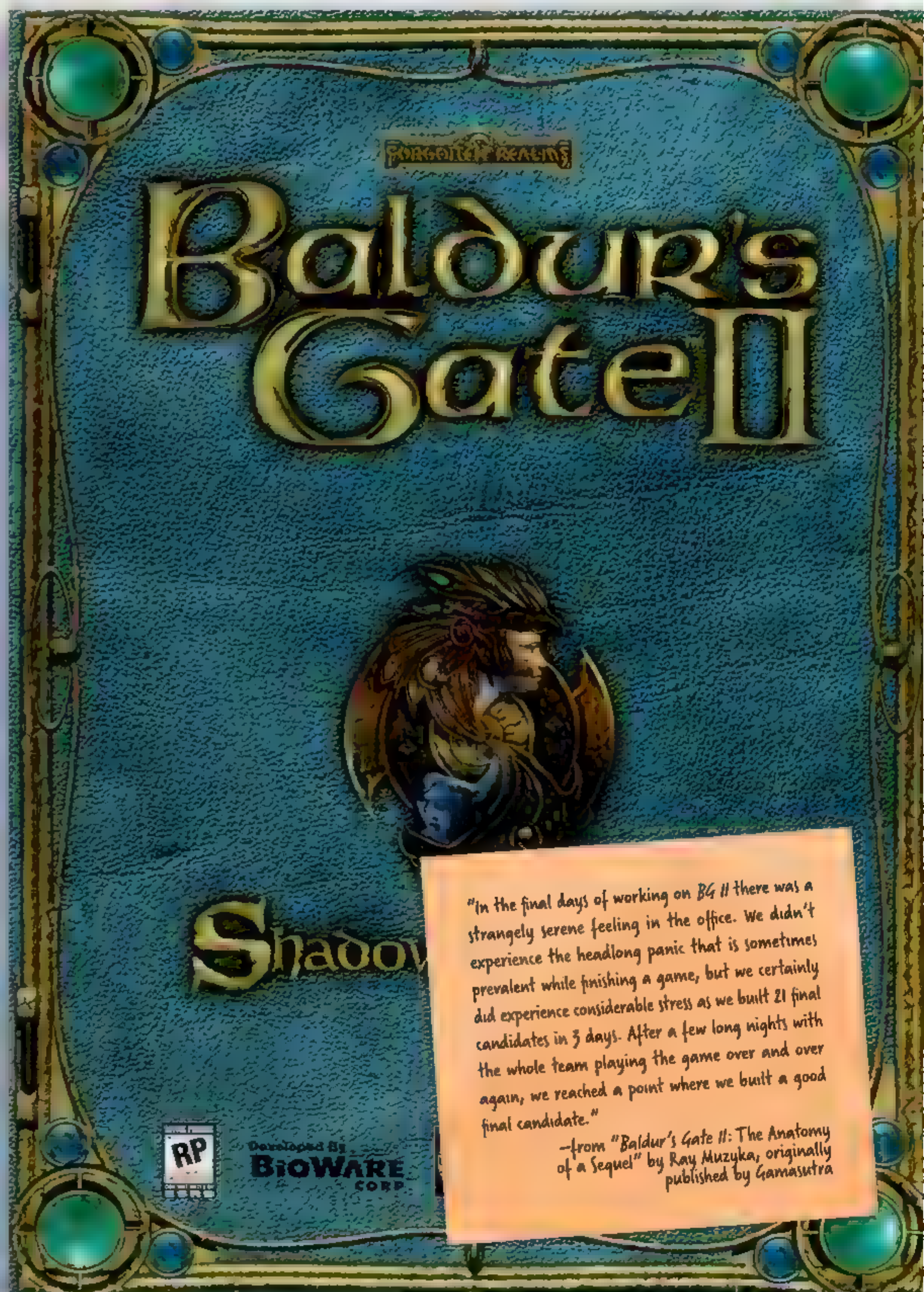
For a while, James wanted to add an entire time-travel section where Sarevok used the Planar Sphere to reverse time and turn the whole Sword Coast into a dictatorship. The player and their party were the only ones who remembered that they had actually defeated Sarevok, and they would have to figure out how to get back to the Planar Sphere to undo his plot.

Stuff like this is why it was so important for BioWare to have a publisher like Black Isle Studios, specifically its division director, Feargus Urquhart, whose job was to essentially throw cold water on the team for the sake of actually getting the game out.

"It felt like, right up until we shipped, that we had made this big, convoluted mess and we were never going to be able to get it fixed," David says. "He's the one who actually introduced the idea of: well, maybe you could cut something."

Ray says the team came to this realization months too late.

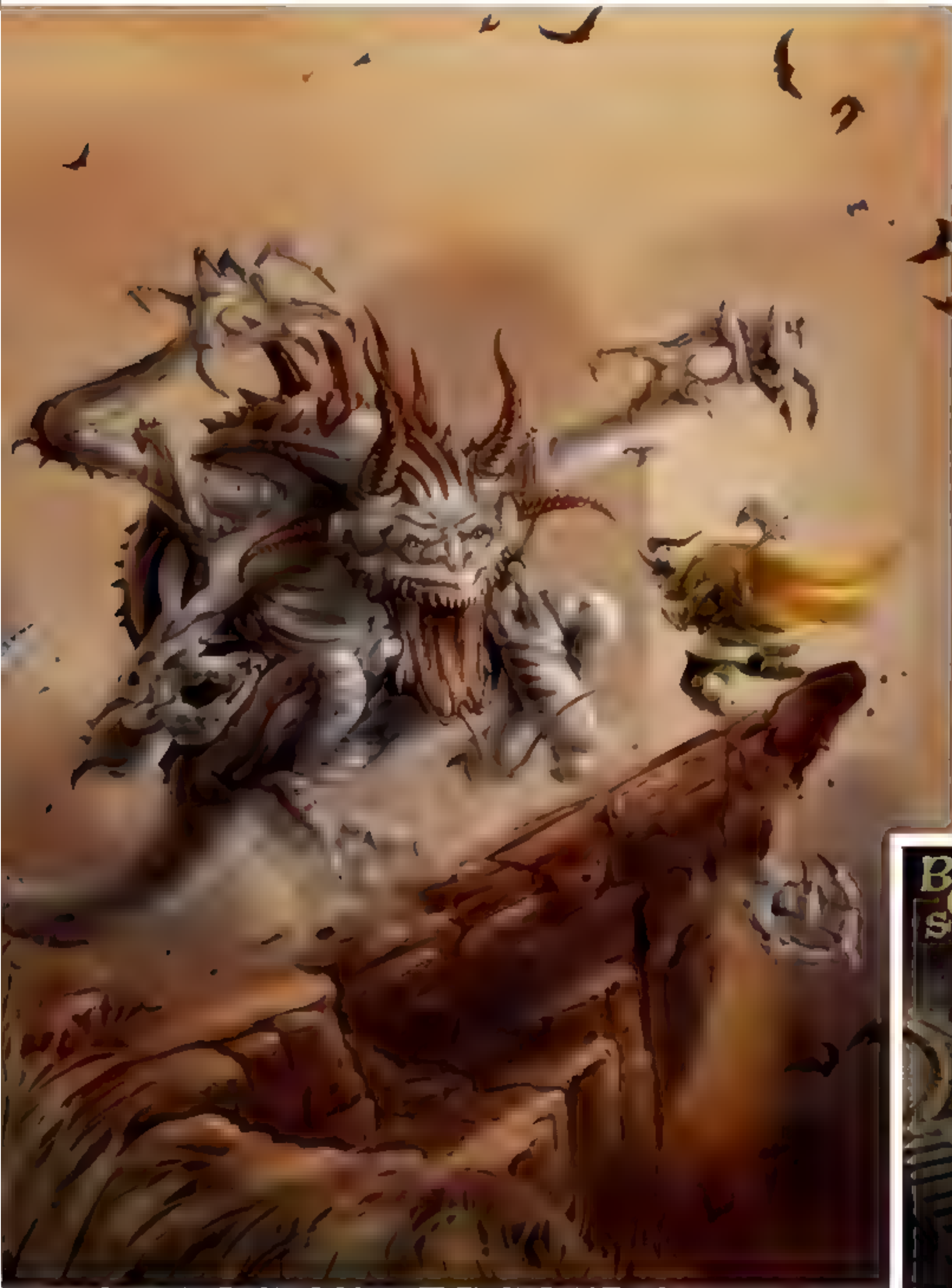
"One of the dangers of development is that game developers have a tendency to always add content if they are given time," Ray wrote in his postmortem. "They don't naturally spend time limiting and polishing content; instead, more time means more stuff."



"In the final days of working on BG II there was a strangely serene feeling in the office. We didn't experience the headlong panic that is sometimes prevalent while finishing a game, but we certainly did experience considerable stress as we built 21 final candidates in 3 days. After a few long nights with the whole team playing the game over and over again, we reached a point where we built a good final candidate."

—from "Baldur's Gate II: The Anatomy of a Sequel" by Ray Muzyka, originally published by Gammasutra



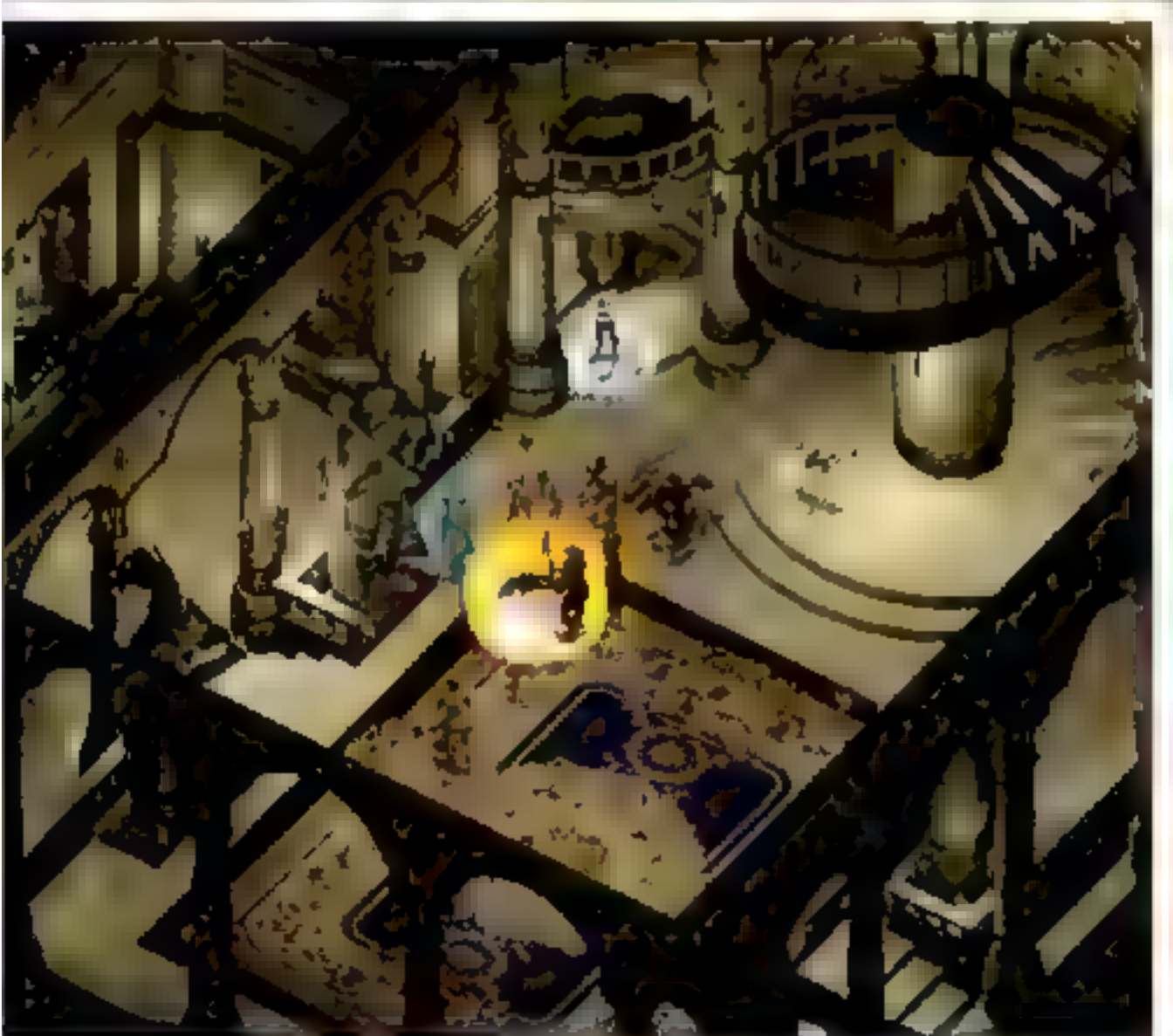
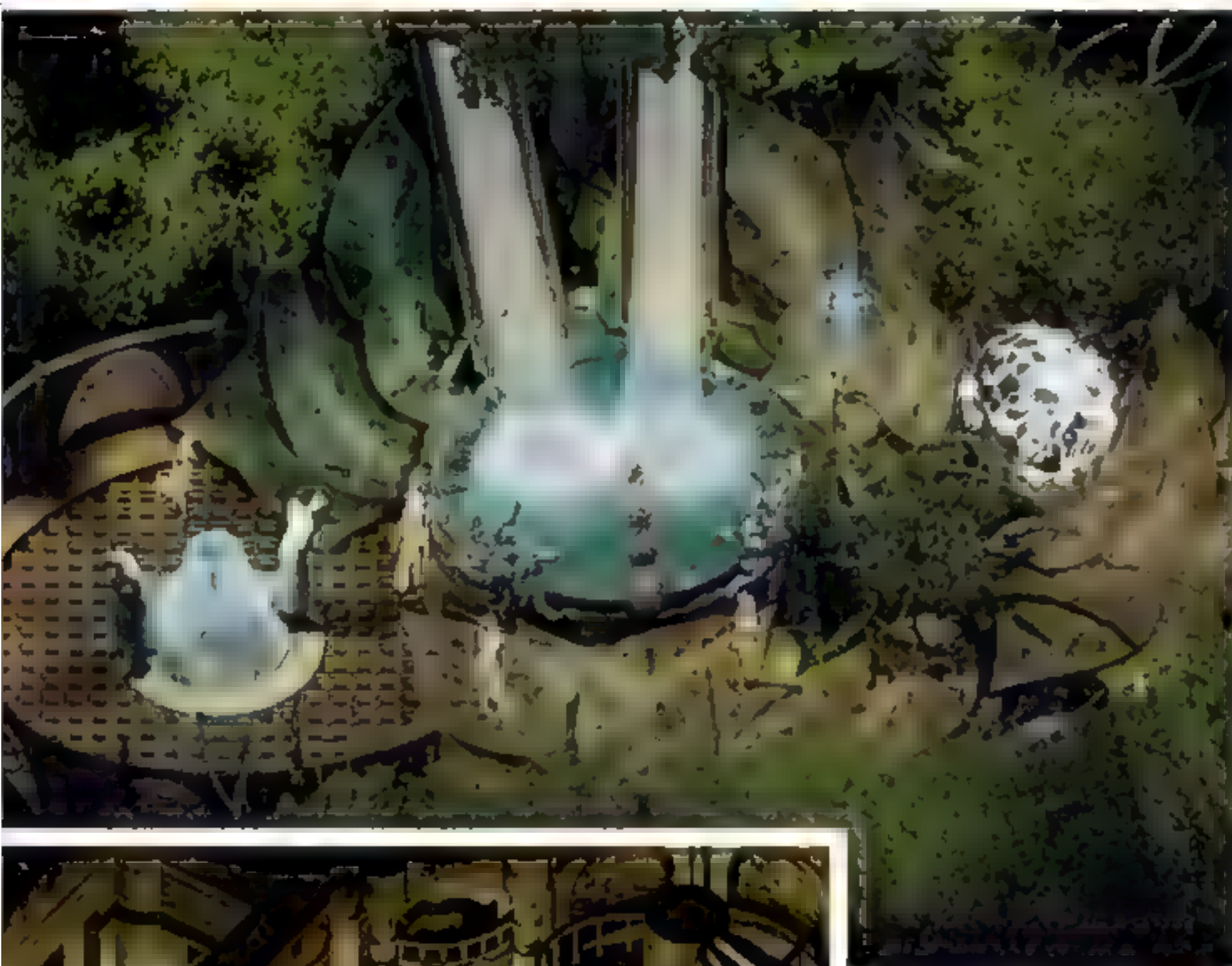








The summit elevation of *Mass Effect 2* allowed players to explore richly detailed and beautiful worlds again.



Along with *Mass Effect 2*, the Summit of *Mass Effect 2* allowed players to explore richly detailed and beautiful worlds again.

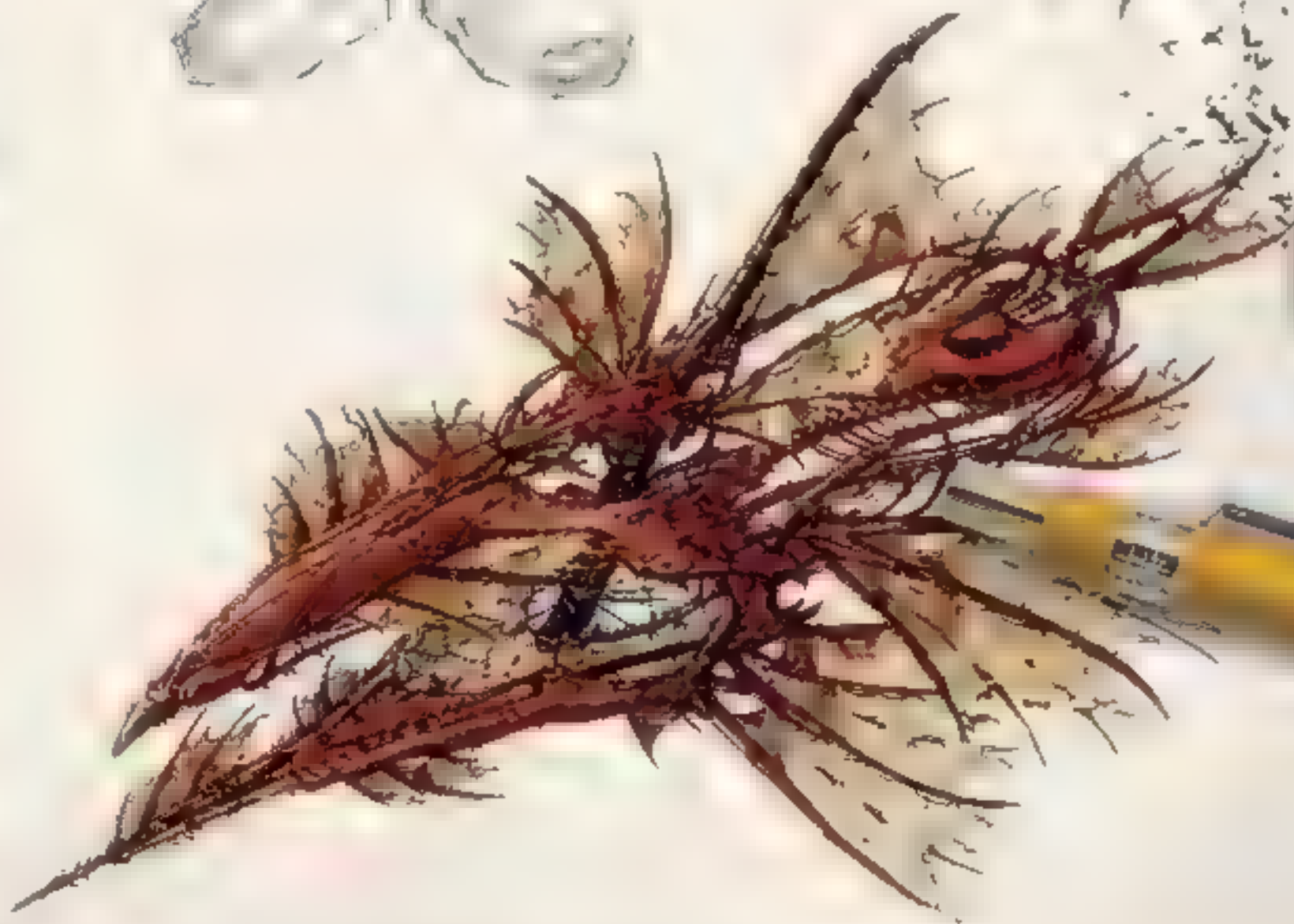
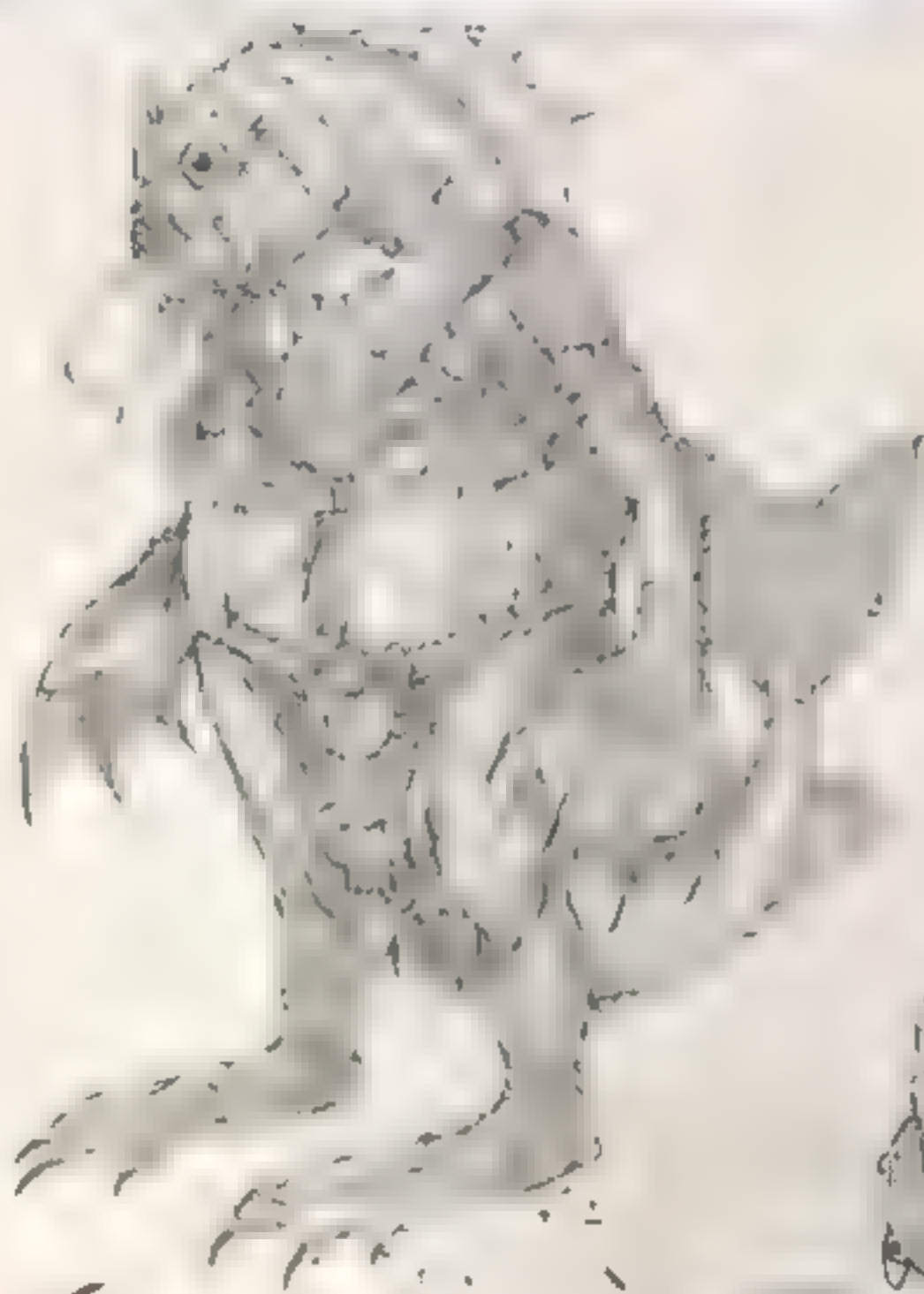
It was a triumph for the team, a testament to the art of the user interface and design that the team had created.

A model of a city of core rule and a tribute to the back of the B. With Edmonton's Terrace of the Tower, the team was able to tell the story of the city.

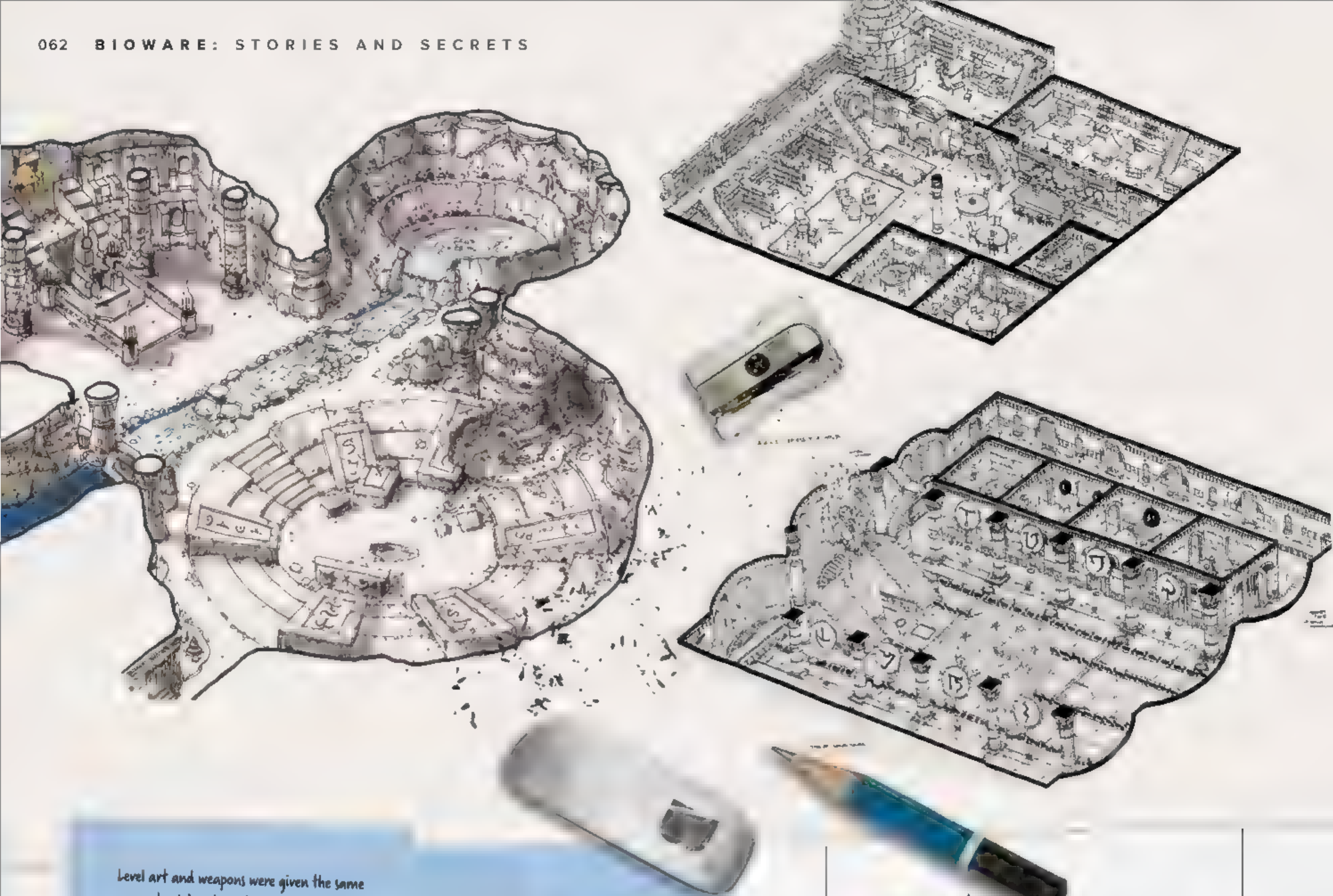




Early BioWare character concepts like these detailed sketches for Baldur's Gate II were done with pencil and pen on paper. Many concepts from this era were drawn on 11" x 17" paper straight out of the studio photocopier

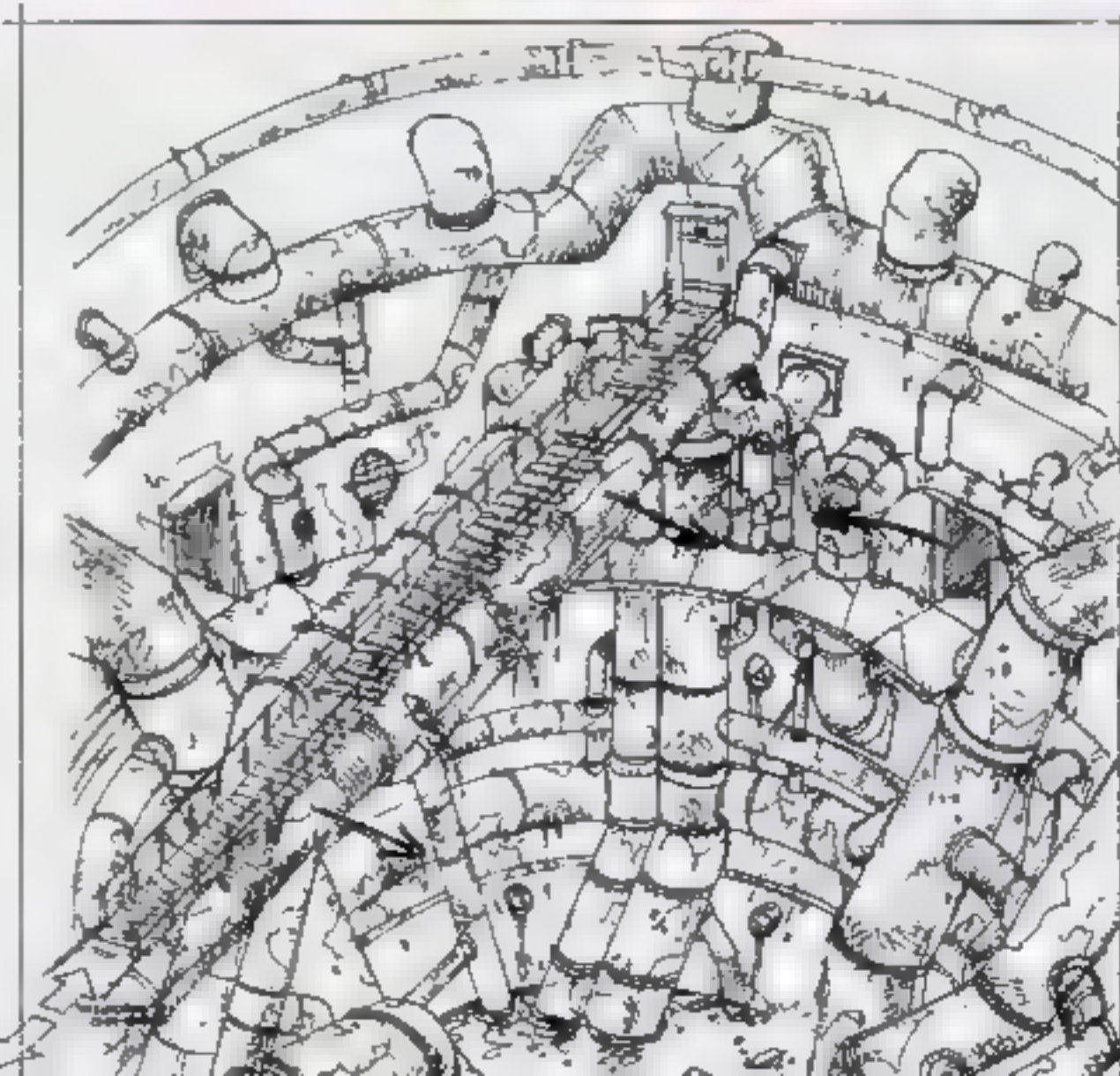






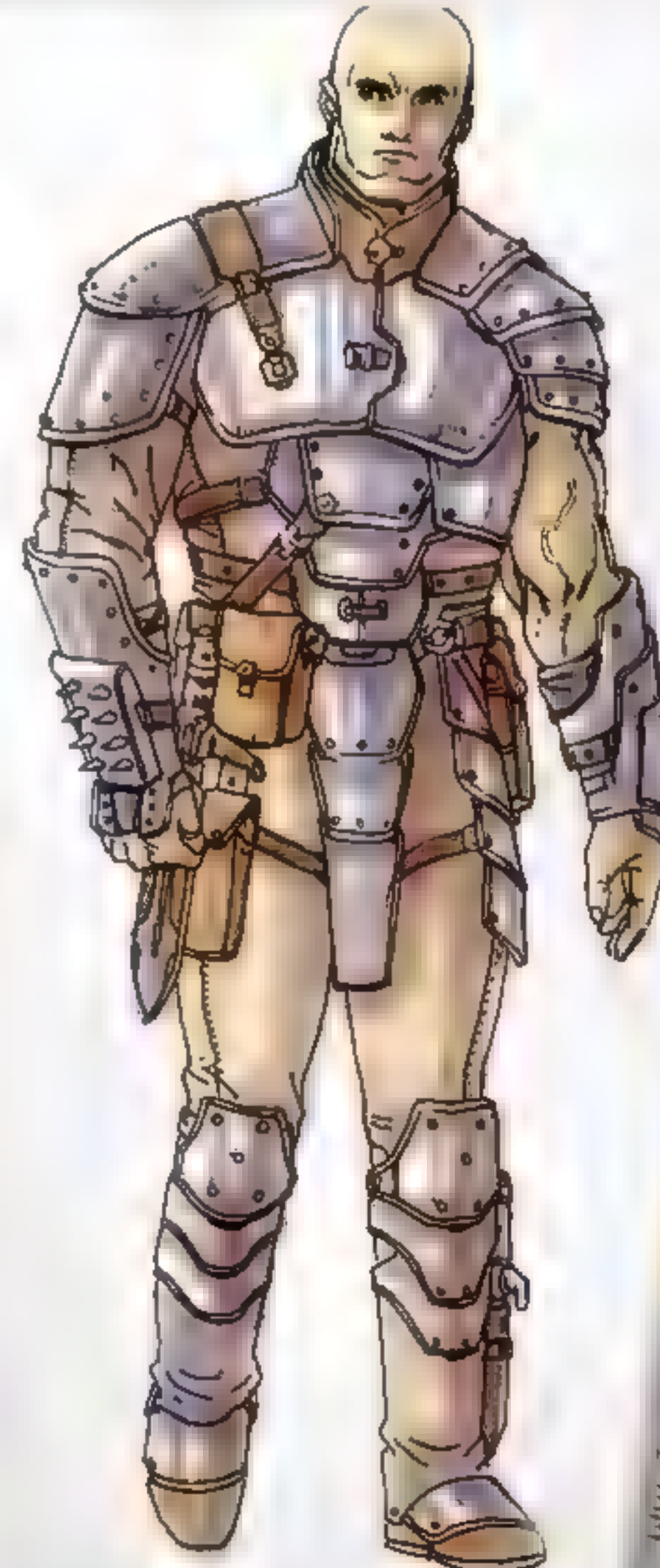
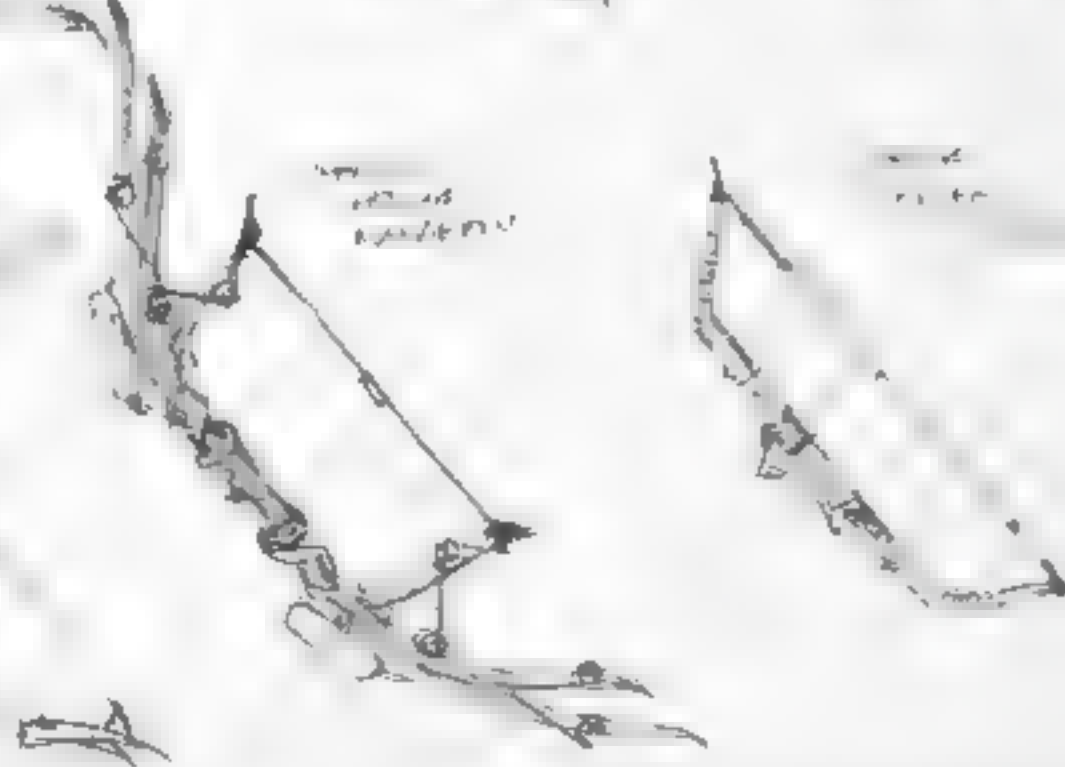
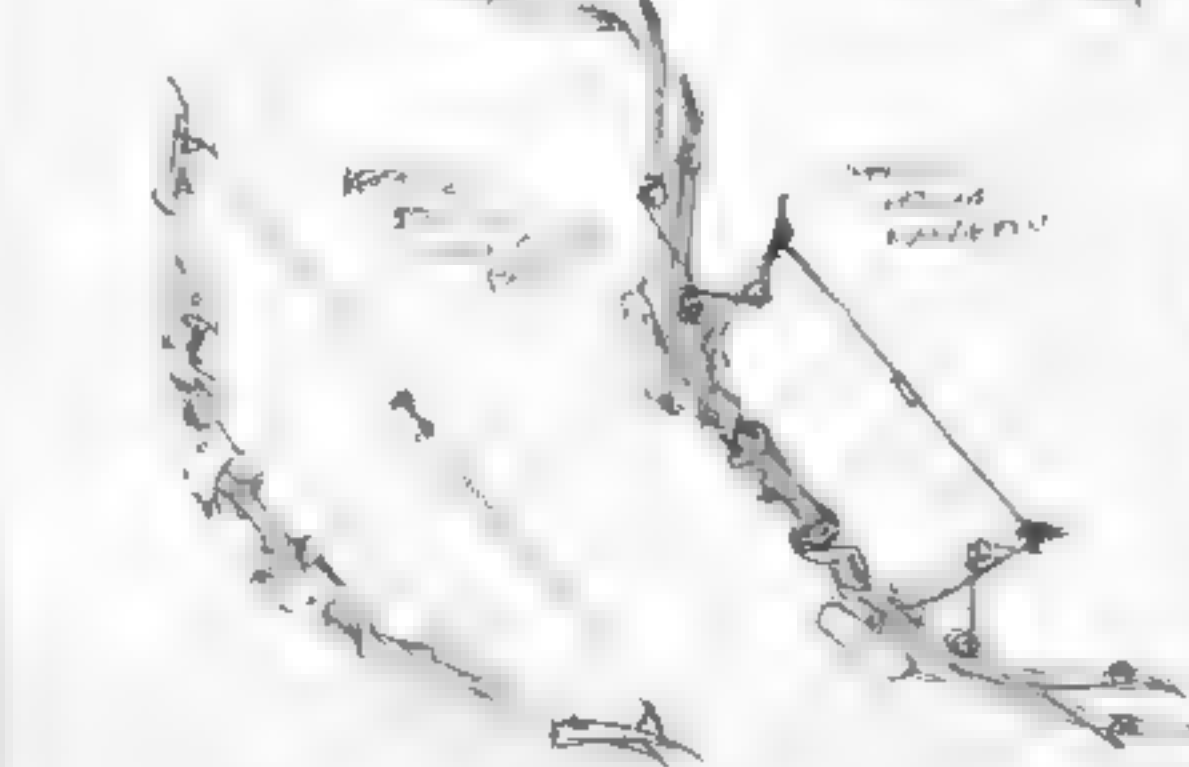
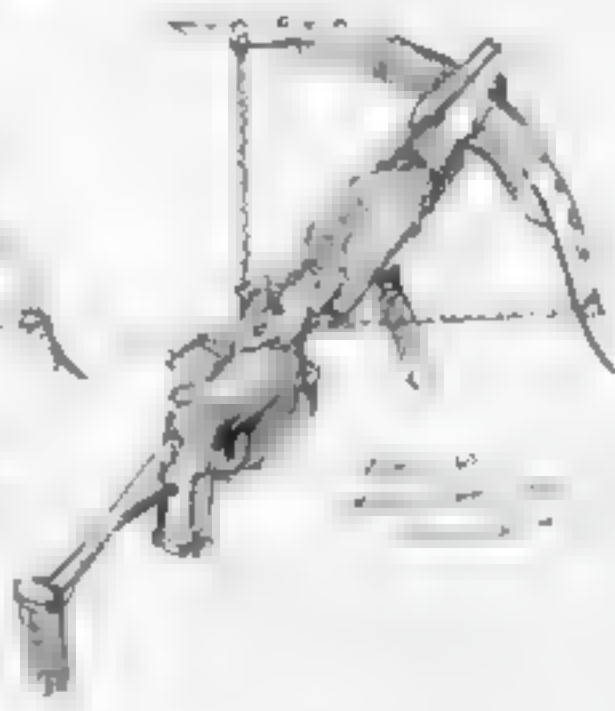
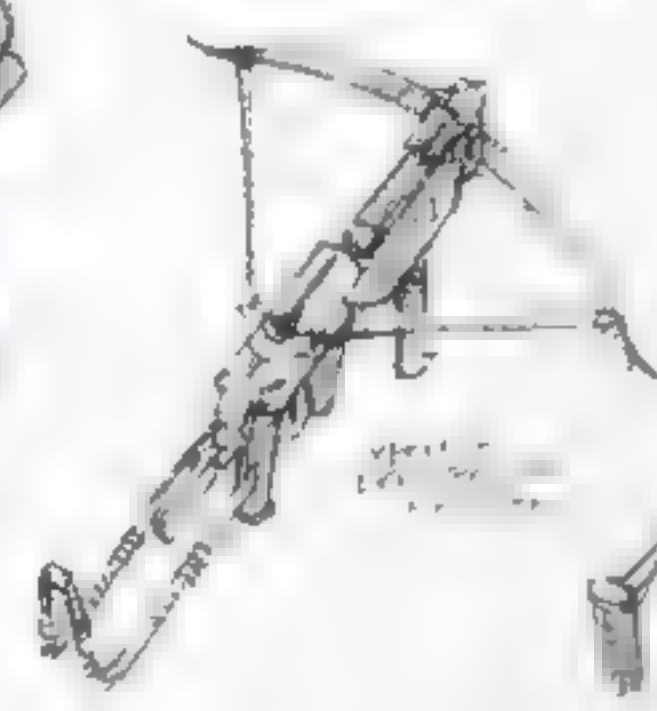
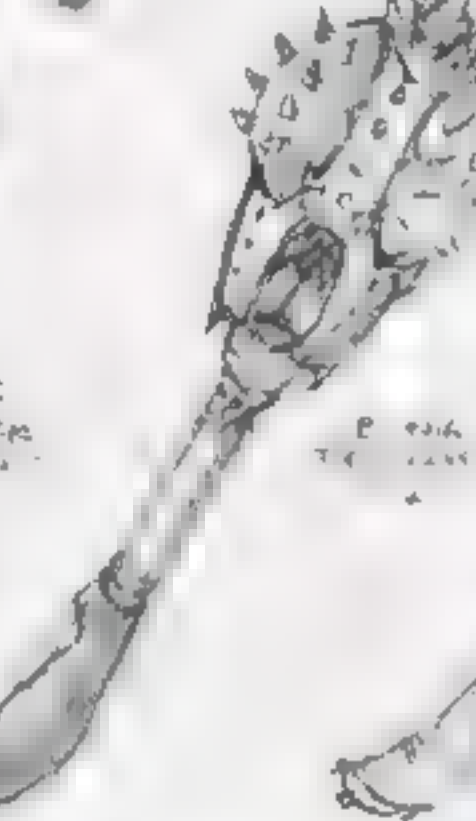
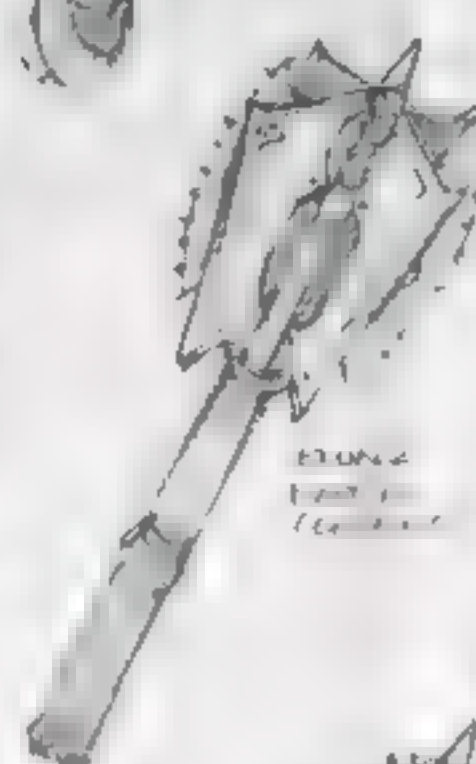
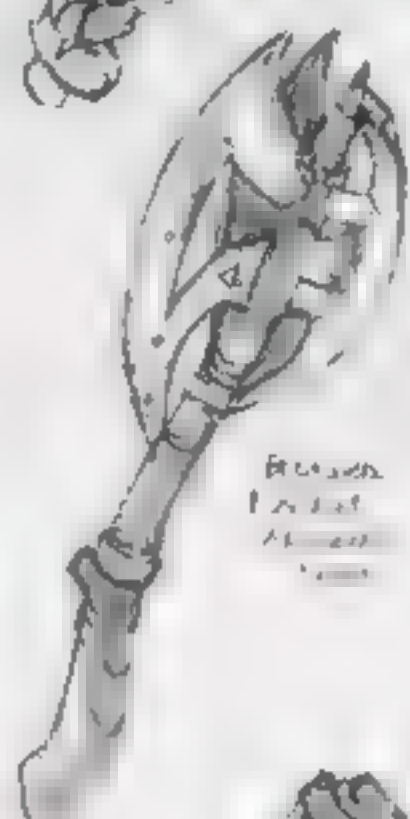
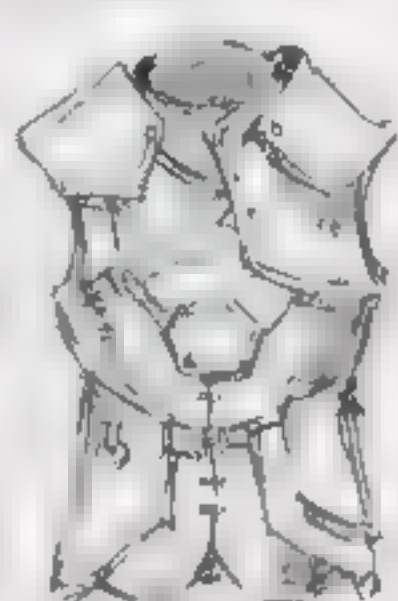
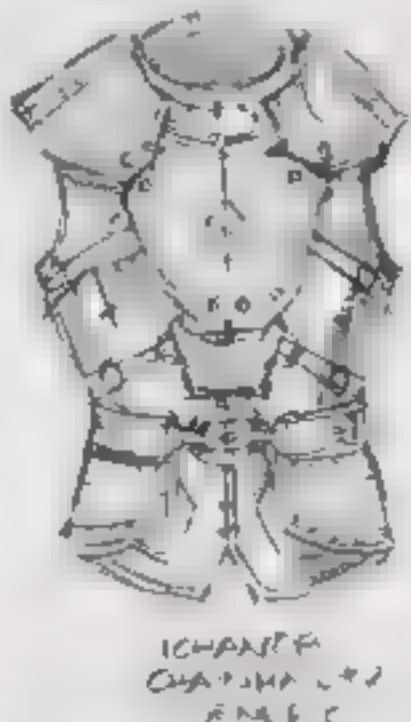
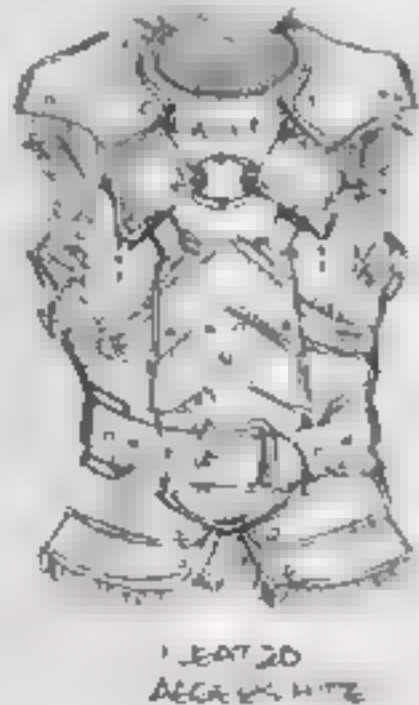
Level art and weapons were given the same conceptual treatment as characters and creatures, drawn and inked in great detail by artists like John Gallagher. Unlike later games, where concepts cannot possibly capture the scope of a game's world, *Baldur's Gate II*'s level concepts could show an entire area in the same perspective players would eventually see it from.

Around this time, BioWare was producing mountains of original artwork on paper for projects like *Shadows of Amn* and *MDK2*. "We would just lay out all the area maps on a drafting table with grid paper," *MDK2* artist Derek Watts says. "We'd have sheets and sheets of original artwork, not that we took care of it. We kind of just threw it in big piles."





ITEM HISTORIES P62





## WHAT'S IN THE BOX?

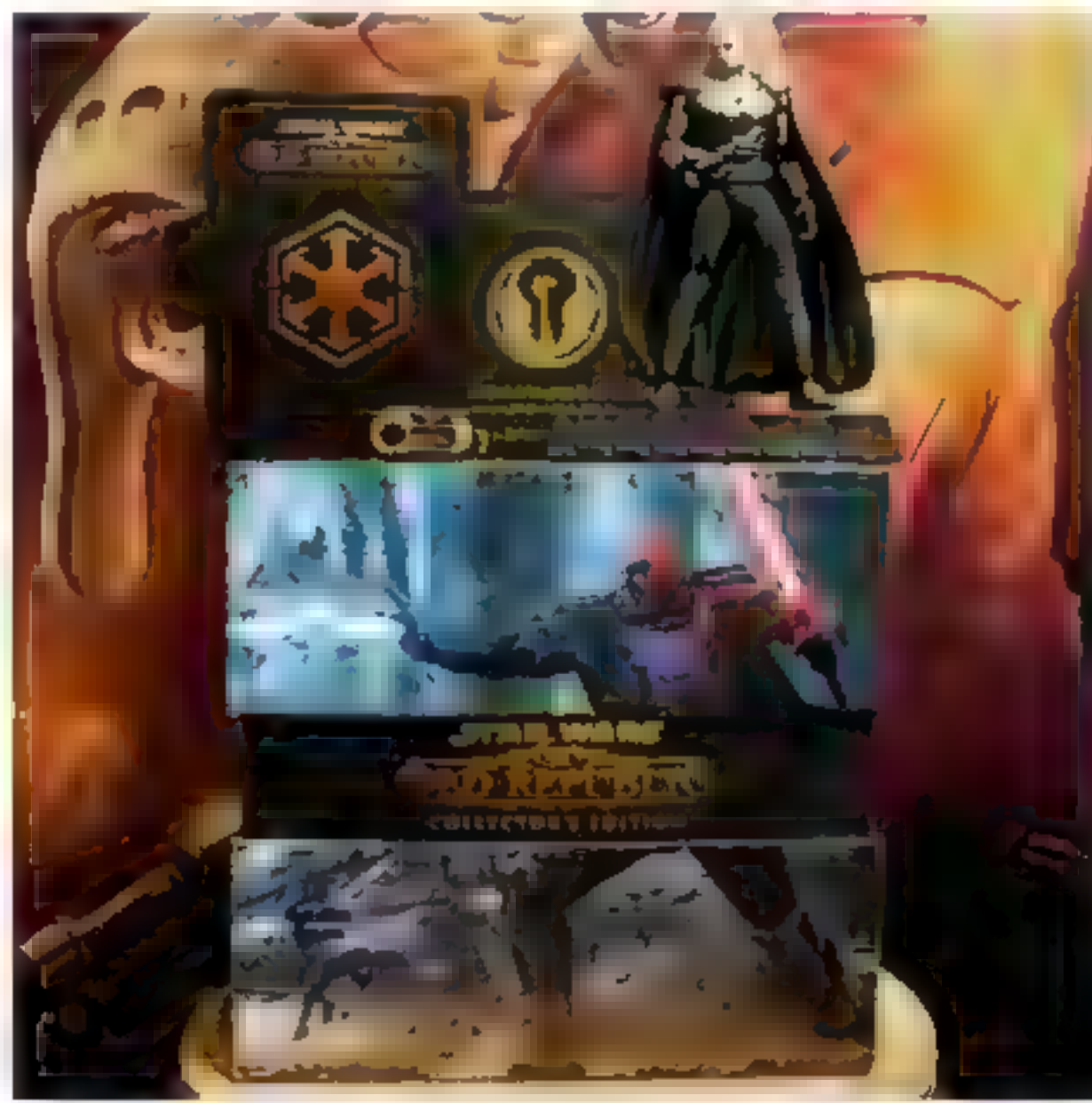
BIOWARE CAME INTO BEING during the height of the PC big-box era, when games shipped with two-hundred-page manuals, quick reference cards, and all manner of priceless ephemera.

*Baldur's Gate II's* Collector's Edition shipped on four special-edition gold CD-ROMs with a bonus disc containing the soundtrack, along with trading cards, a cloth map, and a pad of paper for notes, while *Neverwinter Nights' Collector's Edition* included a T-shirt.

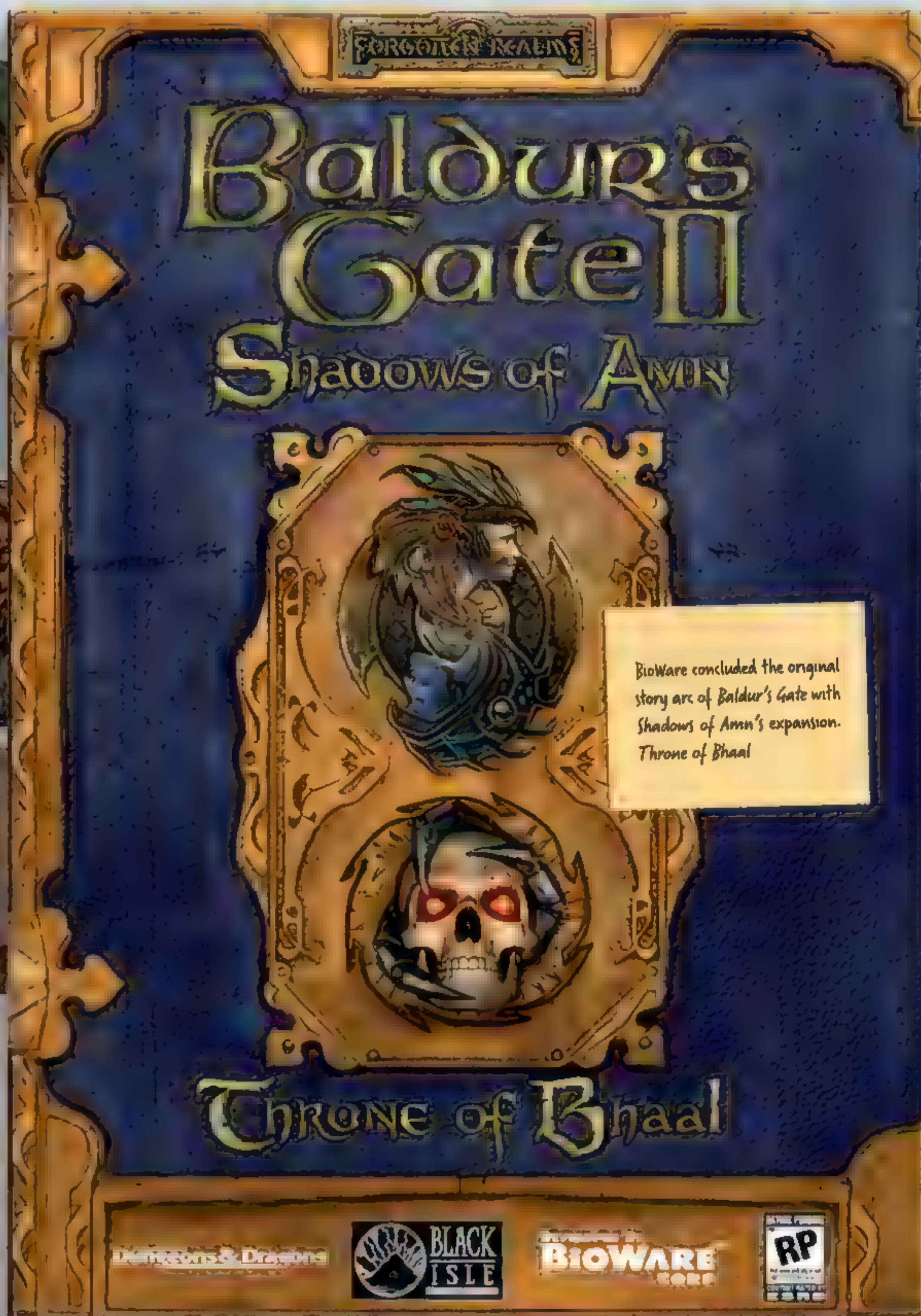
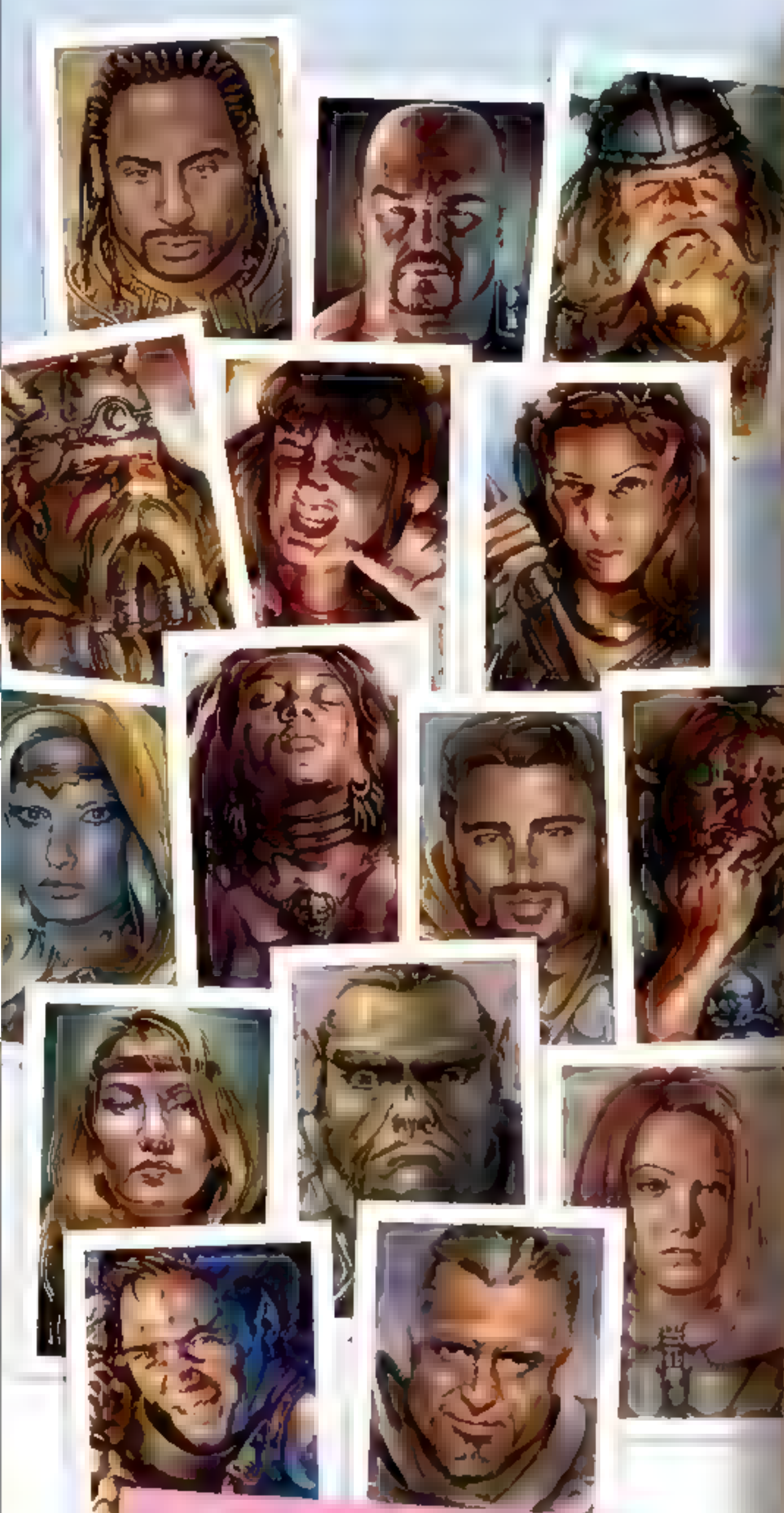
BioWare's love of big-box PC releases persists in the era of downloadable content with massive physical releases of *Star Wars: The Old Republic* in 2011, including an art book and Darth Malgus statue, and *Dragon Age: Inquisition's* Inquisitor's Edition, which included a cloth map of Thedas and sculpted map markers (see page 29).











BioWare concluded the original story arc of Baldur's Gate with Shadows of Amn's expansion, Throne of Bhaal.

Before bringing player characters face to face with NPCs, games like Baldur's Gate II used static painted portraits and voice-over to breathe life into adventurers. Many of the portraits were painted by then director of production art Mike Sass.

"Interestingly, all of these faces were either modeled on BioWare employees or their spouses," Ray Muzyka says.



## REAL TALES OF DEVELOPMENT: BECOMING THE MACHINE

**BALDUR'S GATE II** HAD approximately 1.2 million words. A huge chunk of these words were written by Luke Kristjanson, who also wrote much of the original Baldur's Gate, and a new writer named David Gaider, who had just started at BioWare. David has a hard time remembering how much of the game he ended up writing, but somewhere along the way, writing and design director James Ohlen started calling him "the Machine":

When I came on, James set me to work on a place in the game called the Copper Coronet, which was the first bar you go to in Athkatla. It's a hub for various quests. And he gave that to me

and wanted me to write this quest for, I think it was the bartender?" He had some sort of fighting ring, so James was just like: "Make a quest for that and give him some character." And I sat down and went blah blah blah. And the next day I was done. I guess he assumed it would take me a week and he was like: "Oh!" So then he kept giving me other stuff. And I was so new. I wrote so quickly. James started referring to me as "the Machine"... It surely did not last. I am sure not the Machine today. But at the time I wrote like the wind.

\*It was the owner, actually, a sketchy guy named Lehtinan.





## SHORT SWORDS MAKE TERRIBLE GIFTS

IT'S CUSTOMARY FOR studios to give gifts to developers to celebrate the release of a game. For *Baldur's Gate II*, BioWare gifted each dev with a commemorative pewter short sword.

"They weren't forged; they were cast," recalls former general manager Aaryn Flynn, a programmer on *BG II*. "And they were very heavy and completely unbalanced."


Still, some developers tried to fight each other with them. Not that that lasted very long.

"It was inevitable," Aaryn says, "but I think what people realized very quickly was that they were not real swords. They were not sharp . . . You could drop them and they would shatter."

Now BioWare developers are given framed game discs when they ship a new title.







THE MAKING OF

# NEVERWINTER NIGHTS

## BIOWARE'S THIRD ADDITION TO FORGOTTEN REALMS



### KEY FACTS NEVERWINTER NIGHTS

**RELEASE DATE:**

June 18, 2002

**GENRE:**

RPG

**PLATFORMS:**

Windows, Mac OS, Linux

**EXPANSION CONTENT:**

*Shadows of Undrentide,*  
*Hordes of the Underdark,*  
*Kingmaker*

Developed in Edmonton

Published by Atari  
(division of Infogrames)

THE VISION FOR *NEVERWINTER NIGHTS* was more than a game—it was a narrative toolbox.

BioWare's third release using the Dungeons & Dragons license allowed players to tell their own stories and build their own campaigns using the digital equivalent of the legendary pen-and-paper games it was based upon—specifically the new-back-then third edition.

Because *Neverwinter Nights* was conceived first and foremost as a multiplayer game, there was a heavy emphasis on user-generated content, a novel idea at the time championed by its core designers, like Rob Bartel and Trent Oster.

The game's appeal revolved around its player-facing tool set, usually reserved for the developers who would use it to create content. Core designer Trent Oster says the decision was made early on for *Neverwinter's* tool set to be player facing. "We're going to have to build a tool set anyway, let's build a tool set that end users can use," Trent argued.

#### OGRES AND GOBLINS AND TROLLS AND BUGBEARS AND ORCS AND . . .

Development of *Neverwinter Nights* lasted five years, roughly from the launch of *Shattered Steel* to well after *Baldur's Gate II* was out the door. Much of that time was spent perfecting the tool set, which was seen as the game's core feature.

Six months before the game launched, the *Neverwinter Nights* team finally got the tool set to a place where they could reliably make content. In the interim, they also switched publishers from Interplay to Infogrames, specifically their Atari imprint.

There was a lot of pressure.

"The game was so huge. You've got a game plus a tool set plus a single-player campaign, and you could play multiplayer," Trent says.

"We looked at *Baldur's Gate II* and said: 'This is the volume of content our users expect. If they can't have ogres and goblins and trolls and bugbears and orcs and orc wizards, they'll be pissed.' So we just kept going and building more and more content."

The team pushed extremely hard in those last months, and it took its toll on everyone involved. "Some content was still getting finished up and we were finding bugs all over the place," Trent says.

The last two weeks of *Neverwinter Nights* in particular were the worst crunch he ever experienced. He estimates he worked 212 hours in fourteen days.

"I was getting to work by eight a.m. and leaving at two or three in the morning. And doing it seven days a week."

When the game launched, half the team worked on the first patch, and the other half took a break. Then they switched.

#### NEVERWINTER NIGHTS BECAME A PROVING GROUND FOR NEW TALENT

For years after the game's release, writers and designers applying to work at BioWare were required to submit a module created in the *Neverwinter Nights* tool set.

"Once we had the tool set, and it was out there, that became the de facto job application," Trent says. "Oh, you want a job as a technical designer? Where's your *Neverwinter* module? Oh, you don't have one? Well, you should have one, and then we'll consider you."





"I LEARNED THE HARD WAY ABOUT APPLYING A VISUAL EFFECT IN AN INFINITE LOOP DURING *NEVERWINTER*. I WAS SCRIPTING A SPELL IMPACT. THE SPELL IMPACT WAS BASICALLY JUST: APPLY A BLOOD WHEN HIT. IT WAS ONE OF THE MINOR SPELLS. SO I HAD SCRIPTED IT AND THEN I TESTED IT ON A WERE-RAT, BUT I ACCIDENTALLY PUT THE VISUAL EFFECT IN AN INFINITE LOOP. SO IT LOOKED LIKE THE ENTIRE SCREEN WAS EXPLODING WITH BLOOD. AND THEN THE FRAME RATE JUST WENT ER-ER-ER. IT TURNED INTO A SLIDESHOW OF BLOOD."

—PRESTON WATAMANIUK, WHO WORKED AS A SYSTEMS DESIGNER ON *NEVERWINTER NIGHTS* BEFORE BECOMING LEAD DESIGNER ON THE *MASS EFFECT* SERIES

While public facing, the tool set was very similar to one used internally, and it gave writers who hadn't written for games before the opportunity to get a feel for the weird job that is writing for video games.

Writing for games isn't like writing for more traditional media—especially for games like BioWare's that give the player agency over the story by way of choices and character customization. Game writers must always consider the player before themselves: what the player will do and what the player will want to do as they engage with the story. Unique tool sets enable the levels of branching dialogue and customization needed to write compelling narrative for games.

Many writers hired on during the development of early *Dragon Age* and *Mass Effect* titles came aboard with the help of *Neverwinter Nights*.

Writer Sheryl Chee had been a fan of BioWare games since the original *Baldur's Gate*. She's played through it fourteen or fifteen times, all told.

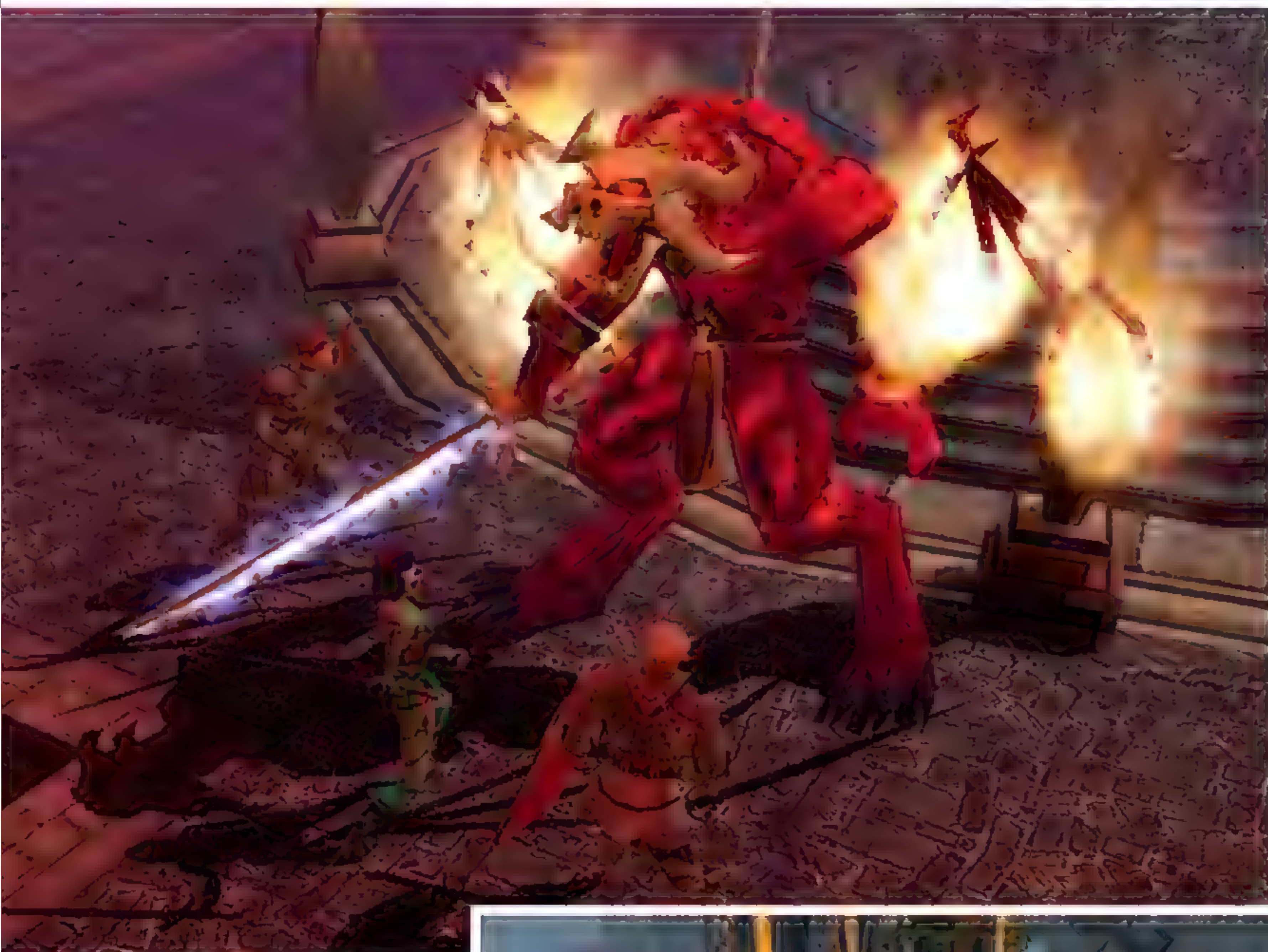
"My goal was to see every written line of dialogue in this game," Sheryl says.

Then she realized she could open up the files and see the actual scripts used for the game. That's where she was introduced to the branching waterfall structure typical of BioWare scenes.

When *Neverwinter Nights* came out and she had an honest-to-god tool set, she started modding. When applying to BioWare, Sheryl submitted two of her modules; the first prompted BioWare to fly her in from Singapore for an interview. The second, about a bard who kills his girlfriend and makes her into a lute so he can play her (inspired by a Loreena McKennitt song), landed her the writing job, and Sheryl credits the modules as essential to getting hired.







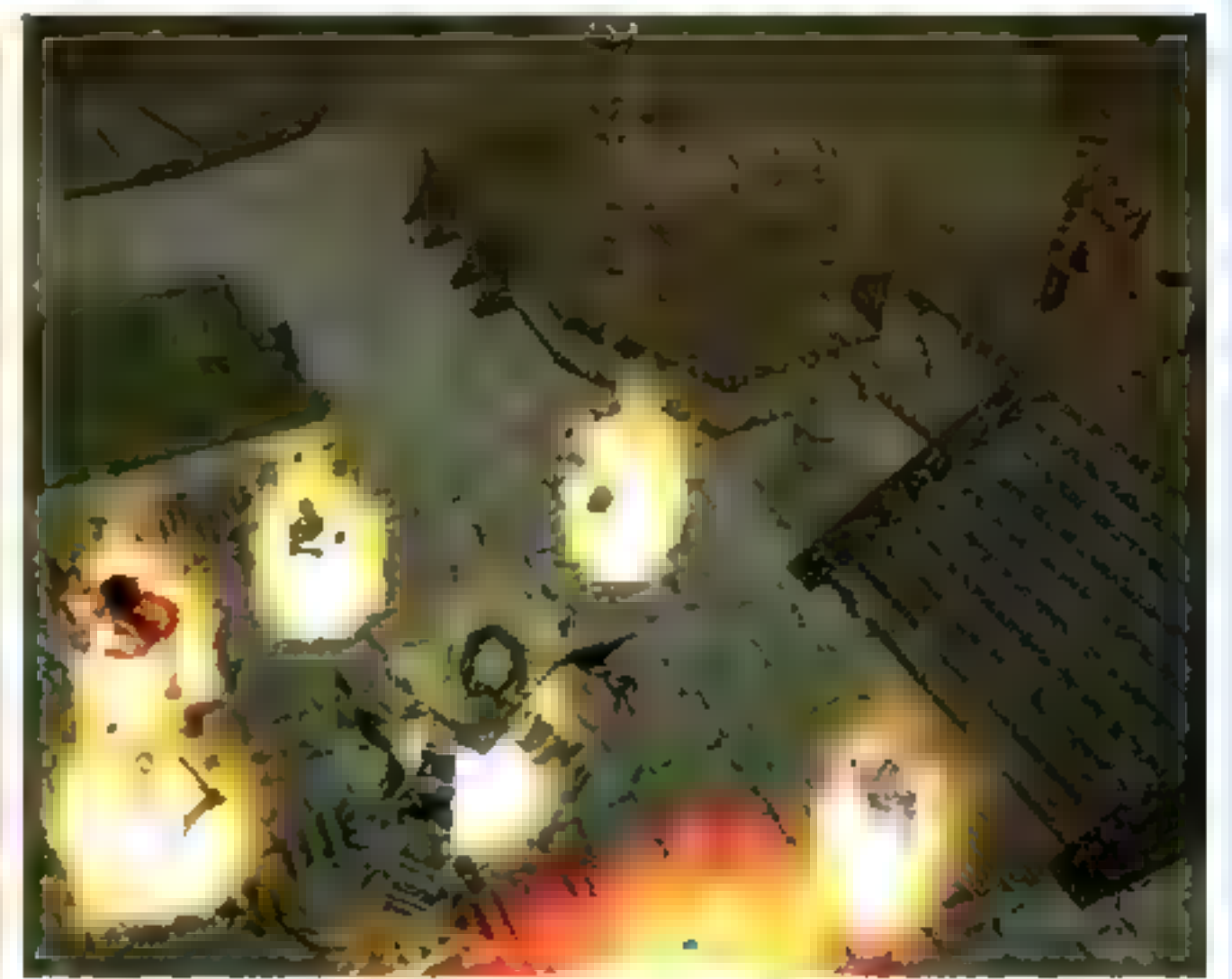
## BIO-TRIVIA

### BANDWIDTH BEHEMOTH

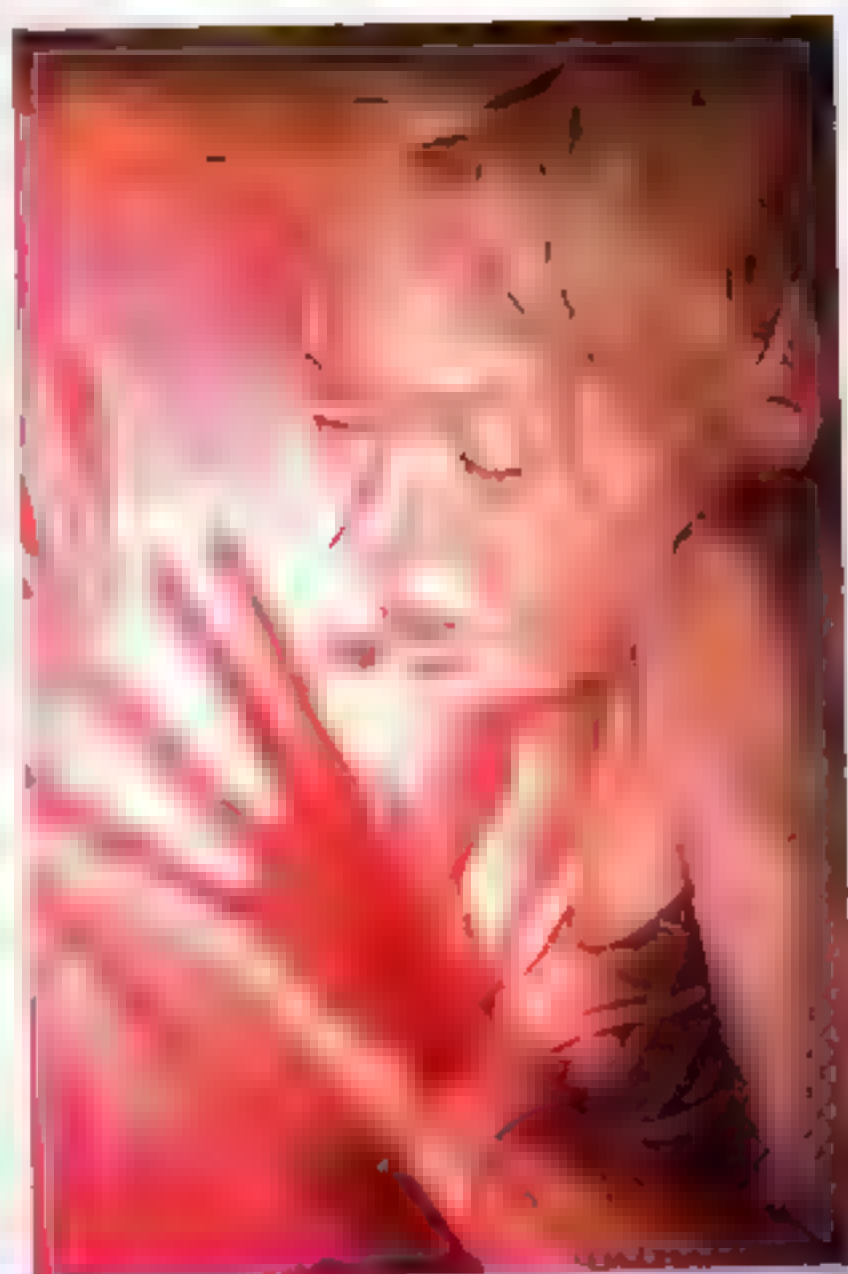
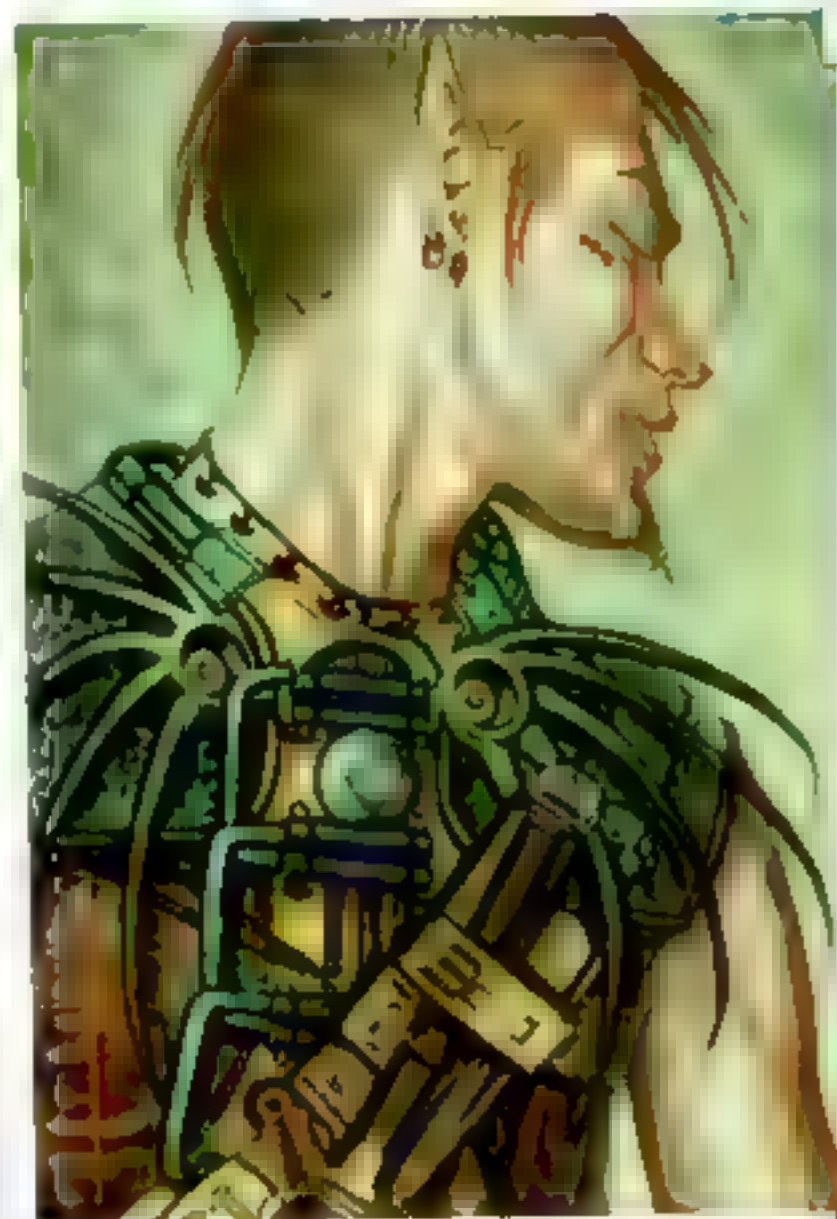
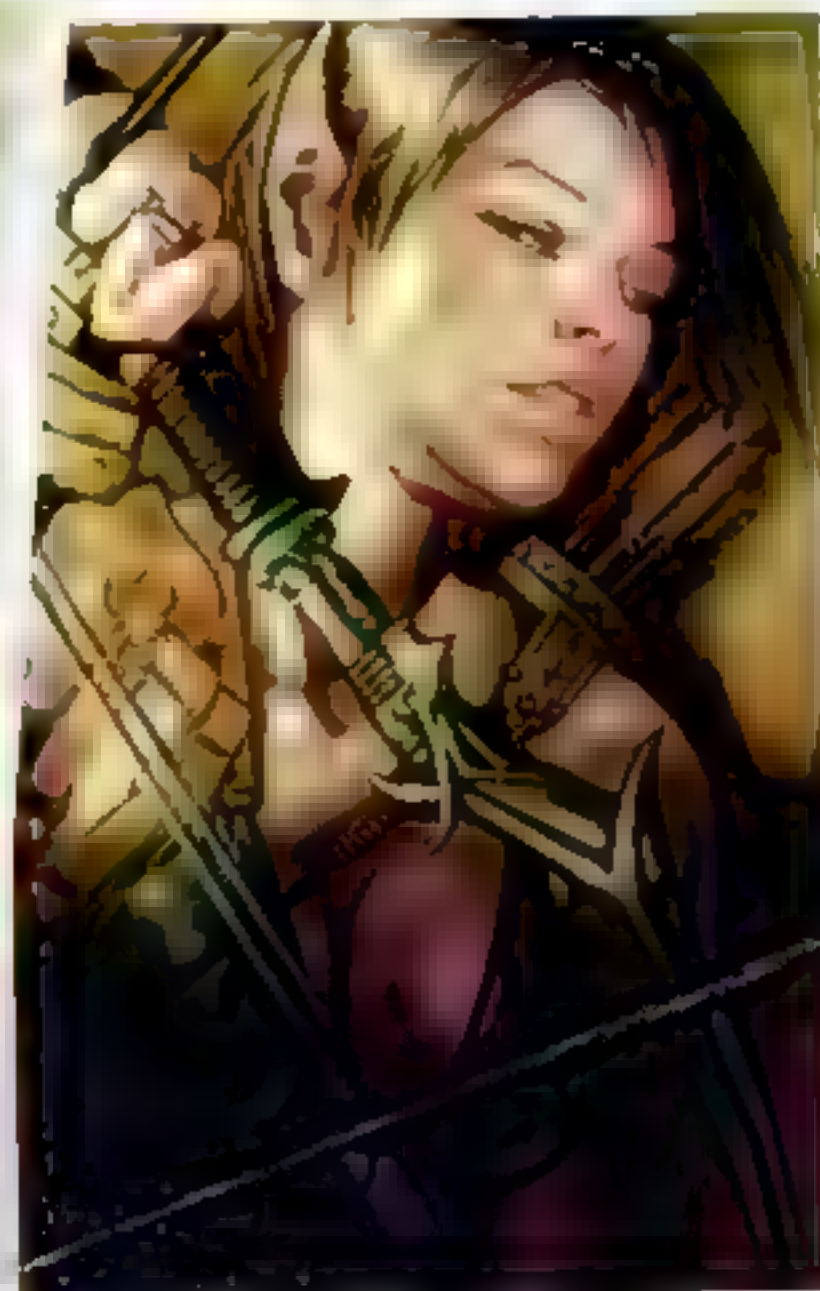
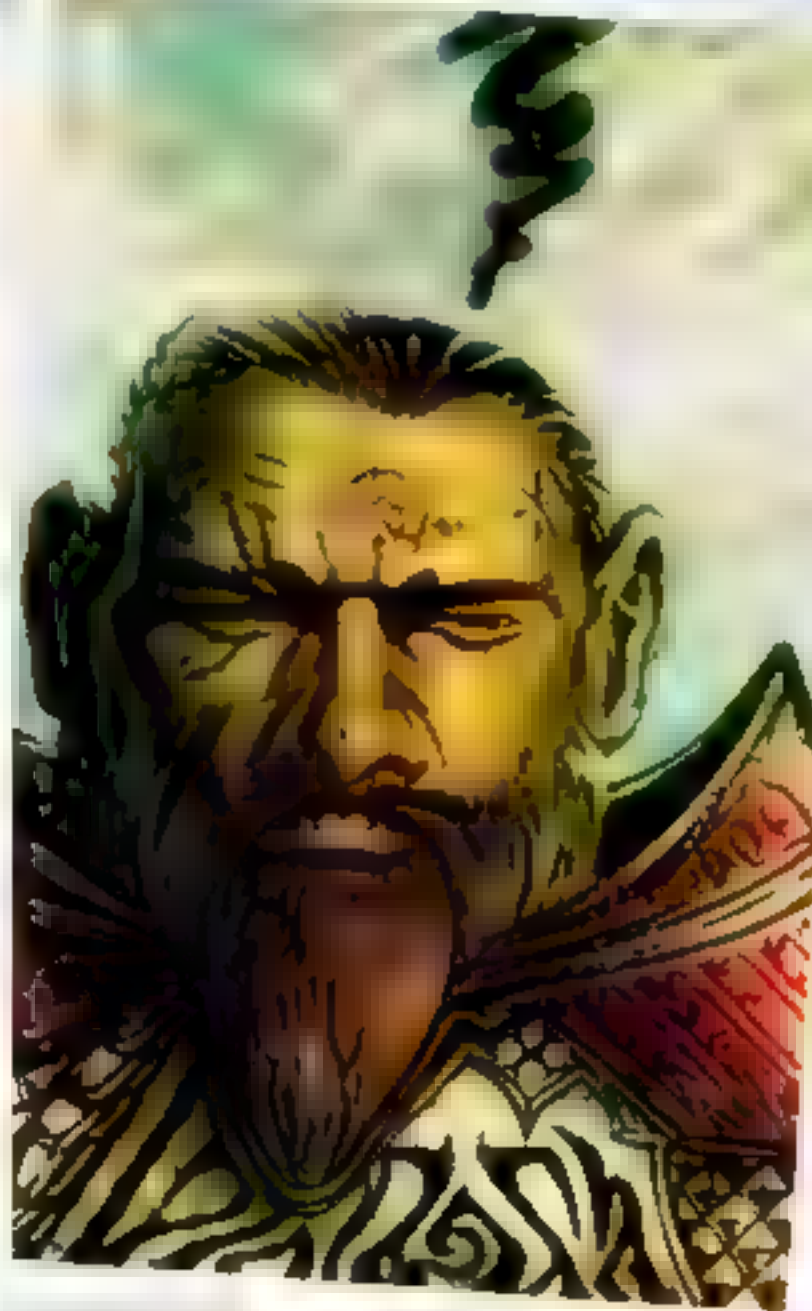
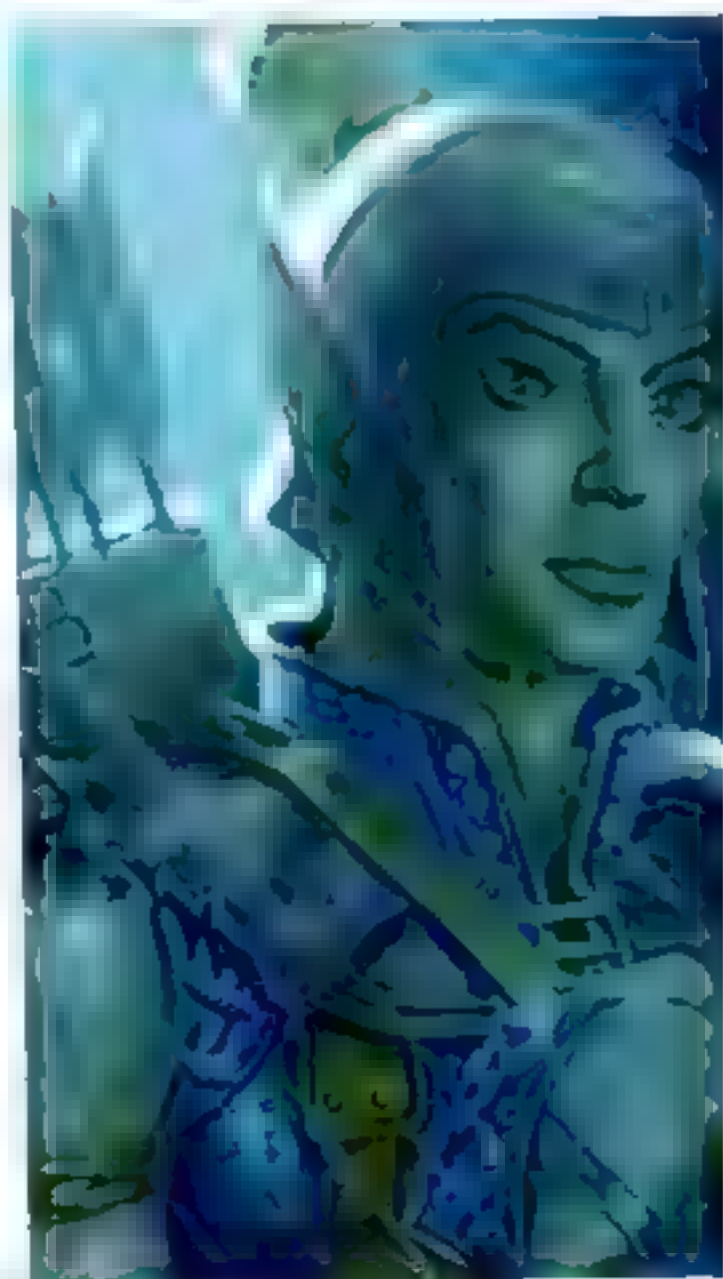
There was a time when BioWare's servers were so overloaded that they were literally crashing. At the time, the 2005 BioWare Edmonton studio was hosting and supporting multiple websites, including the company's D&D campaign in *Neverwinter Nights*, which was also sending massive bursts for *Star Wars: Knights of the Republic* and forth to LucasArts for approval. Some claim there was a point where the studio was upending and downloading more data than the rest of the province combined, though this is pretty hard to verify.











The tradition of painted portraits to depict characters continued in *Neverwinter Nights*. The game also allowed players to create and import their own custom character art by copying five versions of the portrait into a directory in *Neverwinter Nights'* files.

## THE LOST MAC SOURCE CODE

BIOWARE HAD ONE MAC AND IT GOT THROWN OUT

A GREAT CULLING OCCURRED not long after the release of *Neverwinter Nights* and its expansions. Old PCs (including some ancient 286s) were taken into a rarely used corridor in BioWare's Edmonton offices.

Programmer Owen Borstad was working on the *Neverwinter Nights* live team and was responsible for the Mac version of the game at the time—not that there was much to do on it in 2007. Owen was actually the only person in the studio with a Mac computer: a G4 tower that took up a heck of a lot of space at his workstation.

"Because I wasn't using it at the time, and it was taking up space on my desk, I had put it in with that group of computers because I was told that those were sticking around forever," Owen says.

One day, Owen came into the office to find the pile of computers in the corridor missing. He didn't

think much of it, figuring IT had moved them somewhere a little safer. When it came time to release the final patch for *Neverwinter Nights*, Owen went looking for the Mac, asking IT where they were storing it.

But IT wasn't storing it. That giant pile of computers? The ones Owen had thought were safe? They were actually waiting to die.

"They shredded all the hard drives the day before I went to ask them about it," Owen says. "And it turned out that the Mac that they had just shredded had the only source code for the last couple patches of *Neverwinter Nights* on it. And the Mac version that we had in source control was five versions old and nobody updated the source control version in there because it was a giant pain in the butt."

So that's why BioWare never patched the final Mac version of *Neverwinter Nights*.

## FIDDLESTICKS!

TRACING BIOWARE'S ROOTS IN RAW CODE

WHEN JANICE THOMS TOOK A coding job on *Neverwinter Nights*, she was shocked by the state of the Aurora engine, a proprietary game development tool BioWare used to build *Neverwinter Nights* and later *Star Wars: Knights of the Old Republic*. Aurora's code base was rife with copy-paste errors and all kinds of . . . creative improvisations.

"Very unstructured code. Very unstructured process," Janice says. "One of the things that tipped me off that I was in a different industry was the comments in the code were not particularly professional."

It became clear that the team needed to pivot toward something a little more professional when they sent the code outside the walls of the studio for the first time for use in games like *The Witcher* and in classrooms at the University of Alberta. Before this

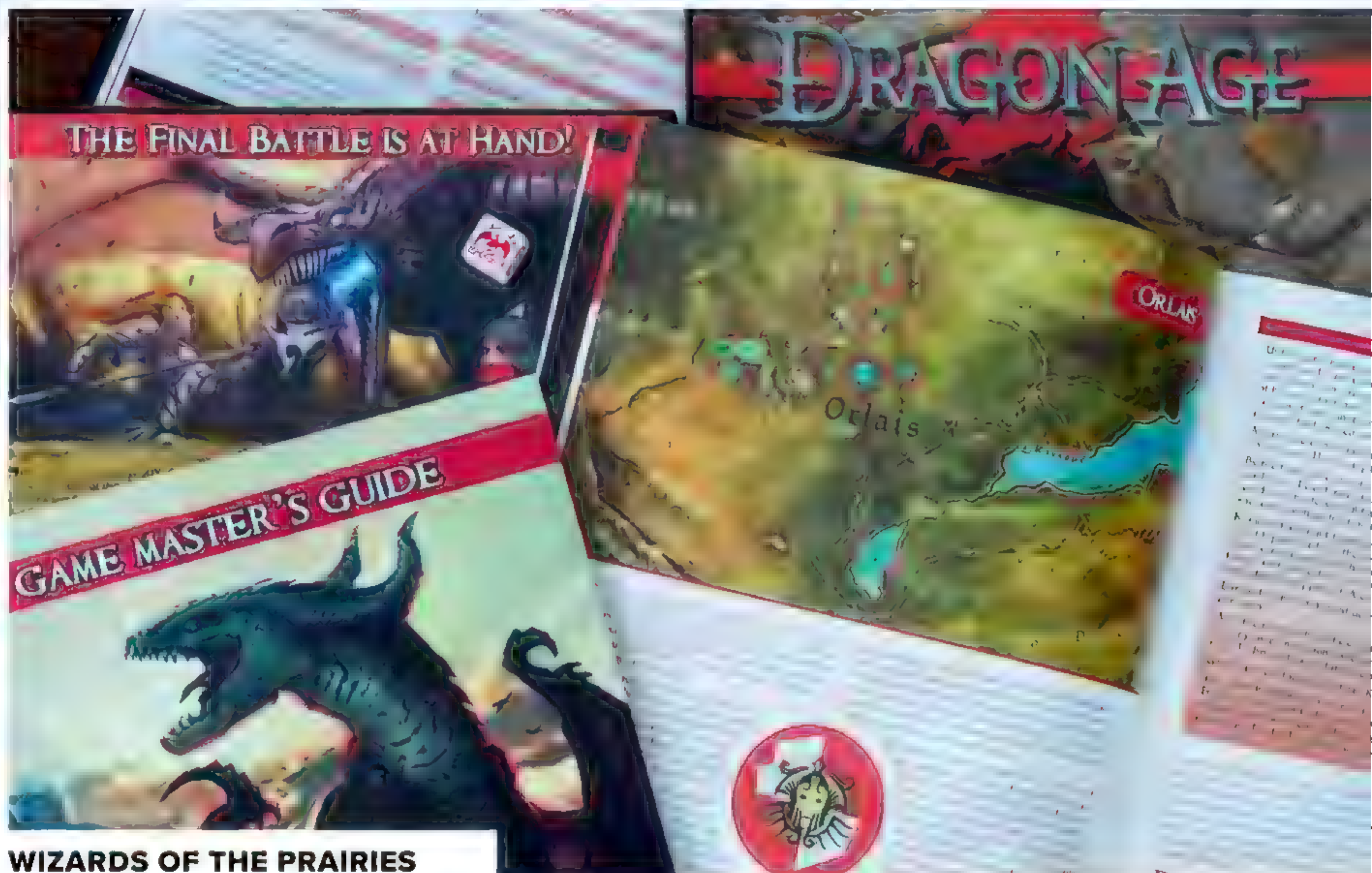
could happen, BioWare's tools programmers had to spend considerable time getting rid of potentially offensive language, weird inside jokes, and plenty of snark hiding between the lines.

"You could see the roots of the company in the code," Janice says.

Certain four-letter words were replaced with friendlier terms like "fiddlesticks." Plenty of lines were excised altogether.

"It had very much a frat house vibe to it," programmer Owen Borstad says. "Most people were in their early twenties, or midtwenties. And everybody was sort of flying by the seat of their pants. Nobody really knew what we were doing. There were some older people that did know, but most people were fairly young and naive and just eager to put out games—and the culture reflected that."





## WIZARDS OF THE PRAIRIES

### DUNGEONS & DRAGONS IN BIOWARE'S DNA

THE LONG LEGACY OF Dungeons & Dragons goes beyond BioWare's digital adventures in the Forgotten Realms and Neverwinter, influencing everything from character names in *Star Wars* to design lexicons, off-work activities, and even the criteria through which the studio has hired key staff in the past.

Many early designers and artists were brought into BioWare on the strength of their dungeon mastering skills, including Matt Goldman, Luke Kristjanson, David Gaider, Patrick Weekes, and Mark Darrah.

"My mother actually introduced me to Dungeons & Dragons," design director Preston Watamaniuk says. "She gave me the original-original, blue box set for Dungeons & Dragons and from then on in, I loved RPGs. I played RPGs through all grades right up until starting at BioWare, basically. And at a certain point [before then], I started doing my own role-playing games."

Preston spent much of his teenage years inventing scenarios, settings, and weapons, figuring out what kind of tabletop gameplay would best engage players. This developed skills that made the transition into video game design a little easier, both when collaborating on design and even when just discussing ideas.

"[D&D] brought in a design lexicon. It brought in people who literally memorized the books. You could drop into a conversation things like: 'Okay, I want something like artifact-level power, like Axe of the Dwarvish Lords or the Sword of Kas, here, or the Machine of Lum the Mad,' and everybody kept up and knew exactly what you're talking about," Trent Oster says.

"We'd be in a hallway or going up an elevator and it was partly like being in a cult because you're having this conversation and other people in the elevator are staring at you like you're some kind of freak. 'They're talking about demon summoning! This is bad!'"

Tabletop games influenced many of the studio's most memorable early characters. BioWare's first creative director, James Ohlen, was a dungeon master long before he got into video game development. Ohlen's campaigns gave rise to everyone from Minsc in *Baldur's Gate* to Bastila, Carth, Mission, Malak, and Revan from *Star Wars: Knights of the Old Republic*.

Outside of work hours, BioWare has a longstanding tradition of office D&D campaigns. The meeting rooms have nice big tables and plenty of whiteboards. There's never a kitchen too far away. In-room tech allows remote players to call in from other studios and map grids to be projected onto tables.

As BioWare evolves, so too do the reference points. BioWare is now a confederacy of nerds. Some still love tabletop. Others are into live-action role-playing (LARP) or high sci-fi novels or weird bad movies or all manner of other nerdy pursuits.

"I think [D&D] was very necessary in the early days because we were making something so deeply rooted in a specific culture," Mark Darrah says. "One thing that we have now that I don't feel like we actually really had in our early days is people whose nerd culture is video game-centric, whereas in the early days, it was all other things: comic books and role-playing games."

BioWare's first creative director, James Ohlen, was a dungeon master long before he got into video game development. Ohlen's campaigns gave rise to everyone from Minsc in *Baldur's Gate* to Bastila, Carth, Mission, Malak, and Revan from *Star Wars: Knights of the Old Republic*.








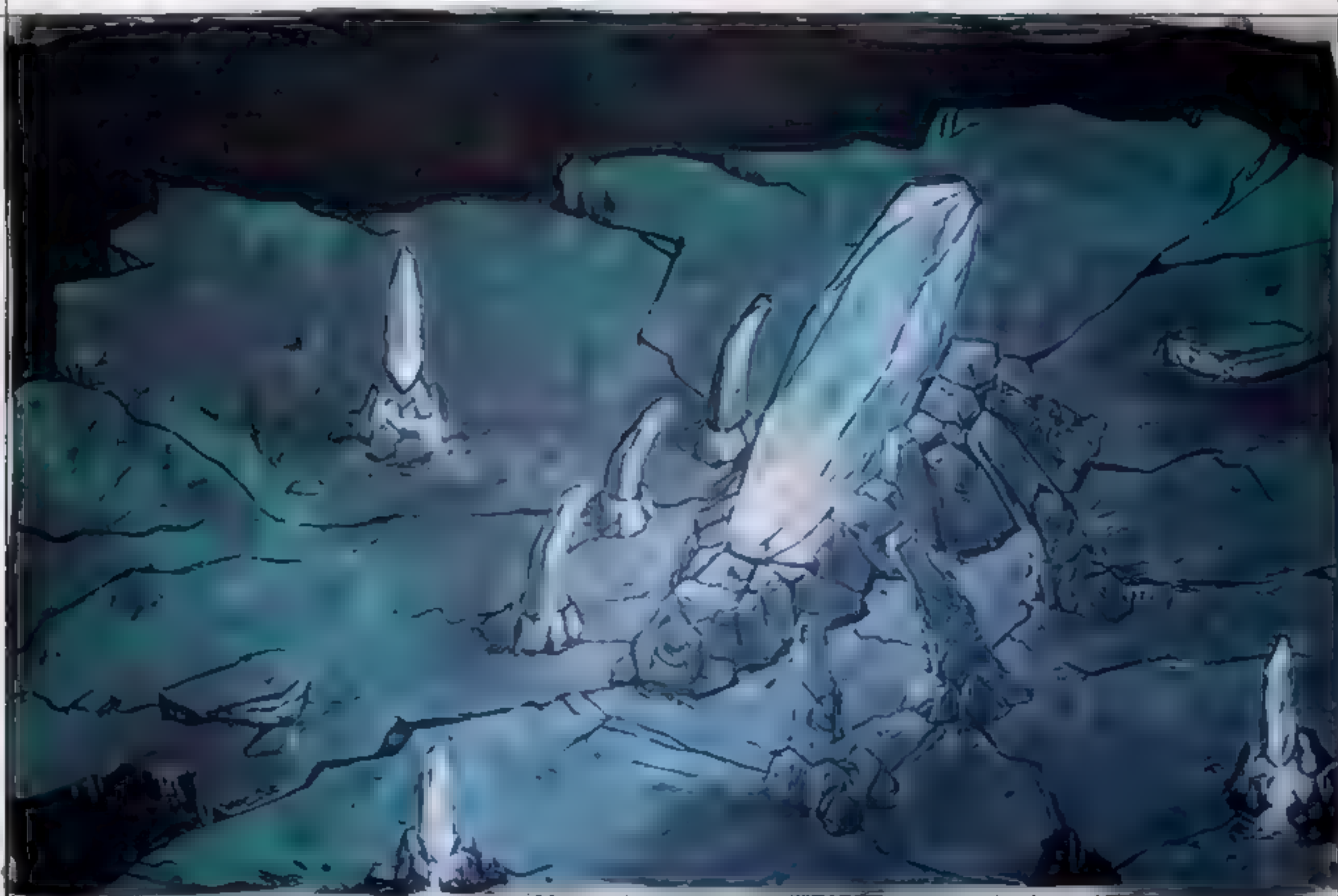






Moving to the new Aurora engine, with its 3D perspective, meant players would get a lot closer to characters in *Neverwinter Nights* than they could in Bioware's previous *Dungeons & Dragons* games. Characters were drawn in greater detail and in numerous poses to capture moods and personalities through body language and facial expressions, something that wasn't as useful for the isometric perspective of *Baldur's Gate* or its sequel.

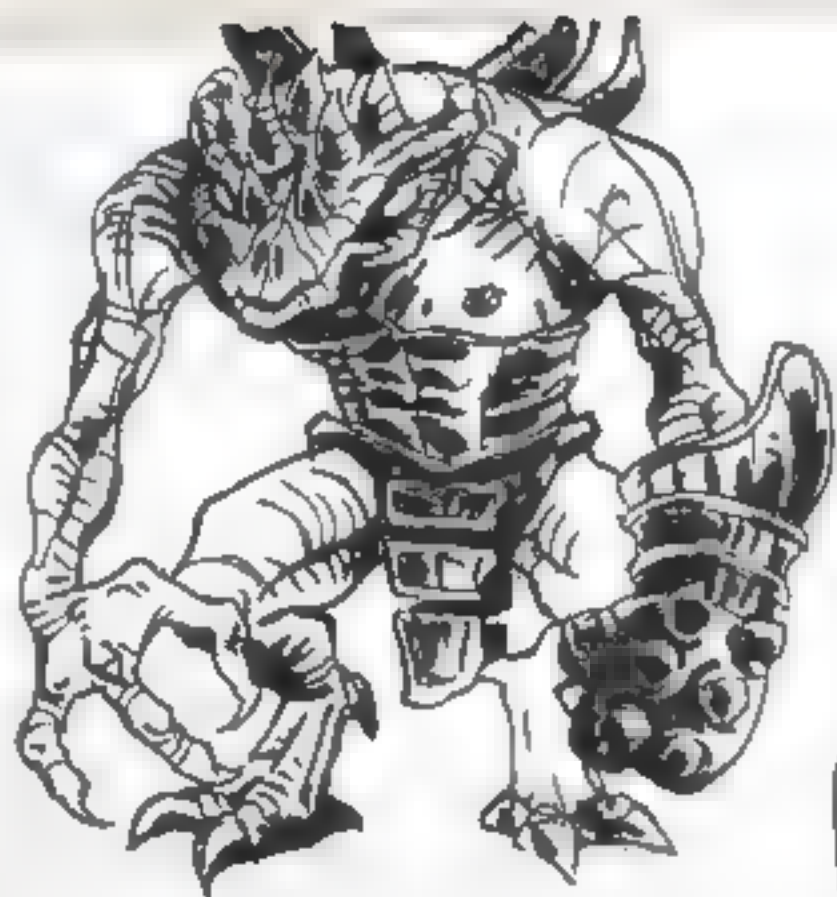




once sketches were approved, artists used an array of markers to bring game worlds to life in vivid color. "The problem was that the felt markers used to stink," says Derek Watts, who did 2D art for *Neverwinter Nights*. "There used to be a real strong chemical smell with those. It got a bit toxic in there."











From the BioWare website:  
 See the latest BioWare news  
 and the latest BioWare games  
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## NEVERWINTER NIGHTS HELD AT BORDER FOR QUESTIONING

WHEN YOU'RE A CANADIAN game developer, it's a matter of course to send emissaries to the United States to promote games and attend conventions.

Developers get pretty used to answering questions from border guards, who tend to be either perplexed about what game developers actually do or wide eyed because they love video games and are hoping the person they're screening worked on their favorites.

In 2001, a team of BioWare developers met the former when traveling to E3 (Electronic Entertainment Expo) with a cache of hard drives holding builds of *Neverwinter Nights*.

"We had to ship computers down and we took with us a bunch of hard drives with extra builds, just in case the computers didn't make it," then interim director of IT Richard Iwaniuk says.

Richard was shepherding the drives over the border to the US with a couple of other IT members. Richard made it over just fine, as did a second

developer. Then they waited for the third person in their party. And waited. And waited.

"Finally the customs officer comes and taps me on the shoulder," Richard says, "And he goes: 'It's time for you guys to come back.'"

He led them to some back area where they had the hard drives laid out.

"You guys are taking technology into the States," Richard remembers the officer saying.

He tried to explain to him that these hard drives contained compiled source code for a video game. There was nothing malicious or untoward. And they would be sure to take the drives back with them when the convention was done.

"At the end of the day, they said, Okay, well, you can go," Richard says.

*Neverwinter Nights* went on to win the E3 Game Critics Awards for Best Role-Playing Game at the show, thanks at least in part to that customs officer.





# THE MAKING OF STAR WARS KNIGHTS OF THE OLD REPUBLIC

## BIOWARE REINVENTS RPGS IN THE STAR WARS UNIVERSE



### KEY FACTS STAR WARS: KNIGHTS OF THE OLD REPUBLIC

#### RELEASE DATE:

July 15, 2003

#### GENRE:

RPG

#### PLATFORMS:

Xbox, Windows, Mac OS

Developed in Edmonton

Published by LucasArts

AFTER MAKING THREE Dungeons & Dragons games, BioWare switched gears to science fantasy, creating a new kind of role-playing experience in the *Star Wars* universe.

Set four thousand years before the rise of the Galactic Empire, *Star Wars: Knights of the Old Republic* was an ambitious RPG that combined the d20 system and BioWare's choice-and-consequences storytelling and brought them to a galaxy far, far away.

The game took place in an ancient era relatively unexplored in the IP to that point, helping to give life to an ever-expanding universe now known as *Star Wars* Legends.

#### A DREAM PROJECT

Working on Dungeons & Dragons games was a dream come true for the many fantasy nerds at BioWare. With a *Star Wars* game, it was the sci-fi nerds' turn.

Janice Thoms started at BioWare in 2002, when *KOTOR* was already in development. She remembers learning they were going to be making a *Star Wars* game at her first company meeting, held at the Princess Theatre on Whyte Avenue.

"The lights dim and then all of a sudden the *Star Wars* theme starts playing, the scroll starts going, and like even to this day? Literally goose bumps when I think of it," Janice says.

"I almost started crying because I'm like, oh my God, I am working in a company where we're actually making *Star Wars*."

#### AN ANCIENT SETTING

While the team loved *Star Wars* and wanted to make a game that did the established canon justice,

they also wanted the freedom to create an epic story that was detached from the films.

This was difficult to do in the same period where figures as influential as Luke and Anakin Skywalker were adventuring across the galaxy.

Dark Horse had done a comic series called *Tales of the Jedi* that imagined a period thousands of years in the past, where everything had a swash-buckling fantasy edge, going so far as to essentially put sails on wooden starships.

After some discussion, BioWare decided to use the ancient setting but bring the technology and aesthetics much closer to what was established in *Episode IV* through *Episode VI*.

"For us, *Star Wars* is timeless," art director Derek Watts says. "This technology has been around for thousands of years. It doesn't really progress that quick. And once we set that, that unblocked us and moved forward so much quicker. We understood what the Sith looked like, what the rebel ships looked like."

LucasArts gave notes: the Star Forge was a little close to the Death Star, the Sand People's civilization shouldn't be developed too much, the Duros' eyes should only be a certain color. But they also gave BioWare the freedom to create bold new characters like Revan and HK-47, build signature ships like the *Ebon Hawk*, and explore less familiar worlds including Korriban, Dantooine, and the Wookiee home world of Kashyyyk.

#### A MASSIVE LEAP FORWARD

Aaryn Flynn programmed both the combat system and the cinematic dialogue system for *KOTOR*.

"The ambition for that game was to create an incredibly authentic *Star Wars* experience. There





"IN JUST FIVE, SIX YEARS, WE'D MADE 2D ISOMETRIC RPGS, A 3D ACTION GAME, AND A 3D RPG. AND NOW WE WERE GOING TO MAKE A 3D RPG ON CONSOLE. THERE WAS A LOT OF NEED TO RECONFIGURE AND REWRITE. WE WEREN'T ITERATING SO MUCH AS WE WERE REINVENTING."

—AARYN FLYNN, FORMER BIOWARE GENERAL MANAGER AND A PROBABLY THE MOST INFLUENTIAL OF THE OLD REPUBLIC



were two parts to that that were deemed to be critical. The first was authentic lightsaber combat," Aaryn says. "And then secondly was cinematic storytelling."

Initially *KOTOR* was planned as an isometric RPG, similar in perspective to the *Baldur's Gate* games, but newly minted project director Casey Hudson and lead designer James Ohlen wanted BioWare's first *Star Wars* game to be more cinematic in scope. Every time a player met a character, they needed to be able to look them in the eyes while they spoke.

Other than the player character, the entire game would feature full voice-over, requiring characters to have lip-synching and animation for every line. It was a hell of a risk, and it required a massive change in the ways the team created and animated characters.

"We went from *Neverwinter Nights*, which had piece-based characters," lead animator Steve Gilmour says. "They had painted-on faces. They didn't even have fingers. They had little fists. You'd stick a sword in their hand, but if they were just walking around, they had a little fist."

*Knights of the Old Republic* came out just a year later, but it was a massive step forward in digital acting for the studio.

"We had articulated faces. We had phoneme recognition software. We had articulating fingers . . . The technology jump between those two games is shocking," Steve says. "*Knights of the Old Republic*, at the time it came out, looked spectacular. There were very few games that looked as good as it did."





## STATE-OF-THE-GAME DIARY

A state-of-the-game email written by *Knights of the Old Republic* writer Luke Kristjanson, dated January 28, 2003, about ten months before the game shipped. Writers on the project were responsible for simple camera placement during conversation cutscenes.

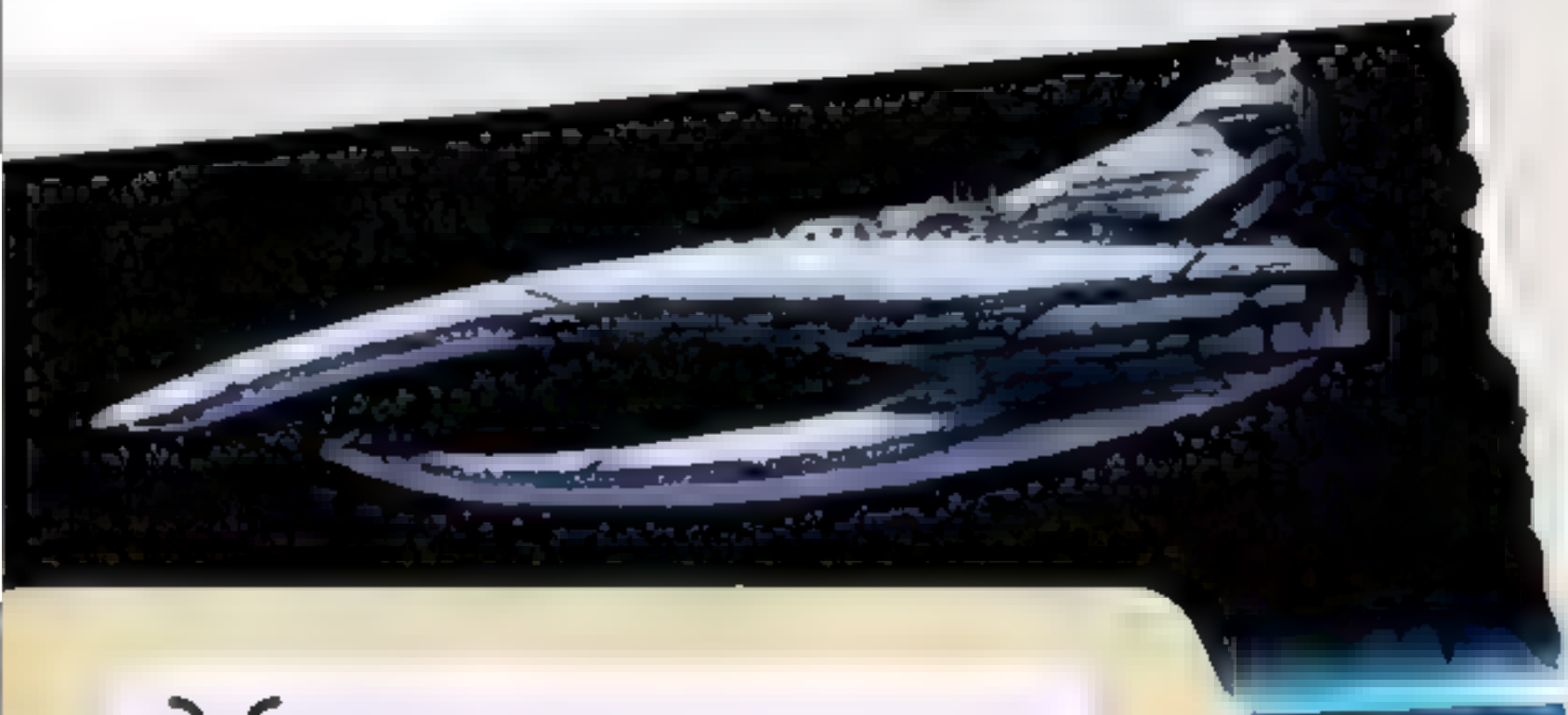
**Subject:** State of the Game Diary  
**From:** Lukas Kristjanson, Designer,  
*Star Wars: Knights of the Old Republic*  
**Date Sent:** January 28, 2003

**THIS IS A VERY STRESSFUL TIME** on the project for all involved, but it is also the most rewarding. Through most of development we have a sense of what the player will experience, but can't see it directly. As we begin the shift from construction to polishing and balance, major systems are functioning and story content is quite close to complete, but that just means we have even more work ahead. It's simple to spot bugs that cause crashes or strip the textures from your Wookiees, but determining if a given encounter is fun or not gets a bit subjective.

There are many factors that determine how enjoyable a game will be, from the smoothness of the frame rate to the quality of the dialogue. The overall presentation, however, must do the content justice. Once the path through the story is intuitive, it has to be made seamless and cinematic. The important encounters are in place and happen when they should, but where are the cameras during all of this? From where does the player view the scene? What is happening to the rest of the party while he or she is interacting with NPCs? If this sounds more like organizing a movie set . . . well, that's because this time it is.

In our past games our talented animators have put together excellent out-of-game movies to further the plot along, and have done so again in *Star Wars: Knights of the Old Republic*, but there is an added dimension this time around, both literally and figuratively. To take full advantage of the 3D environment designed for *KOTOR*, we have gone to great lengths to include many cinematic elements in our basic tool set. This has allowed the designers of the various areas to make conversation more dramatic visually, and to construct in-game cutscenes that would have otherwise been much more time intensive. We have emphasized minor plot points in this way before, but not on the scale of what we are doing here.

The amount of control we have over the visuals has really added to the feeling that we are all acting as directors, especially given that the setting is the *Star Wars* universe. The system has proven fluid enough that we have even decided to increase the number of these small movies. Some are as short as a simple camera pan around a cantina, but they do a great deal to establish a mood, and that is just as important to the presentation as what happens after. It might not seem as obvious as an interesting villain or an impressive-looking starship, but every little moment has to have the same care and attention given to it. That's what makes a game memorable.



#### BUG REPORT: OP SITH

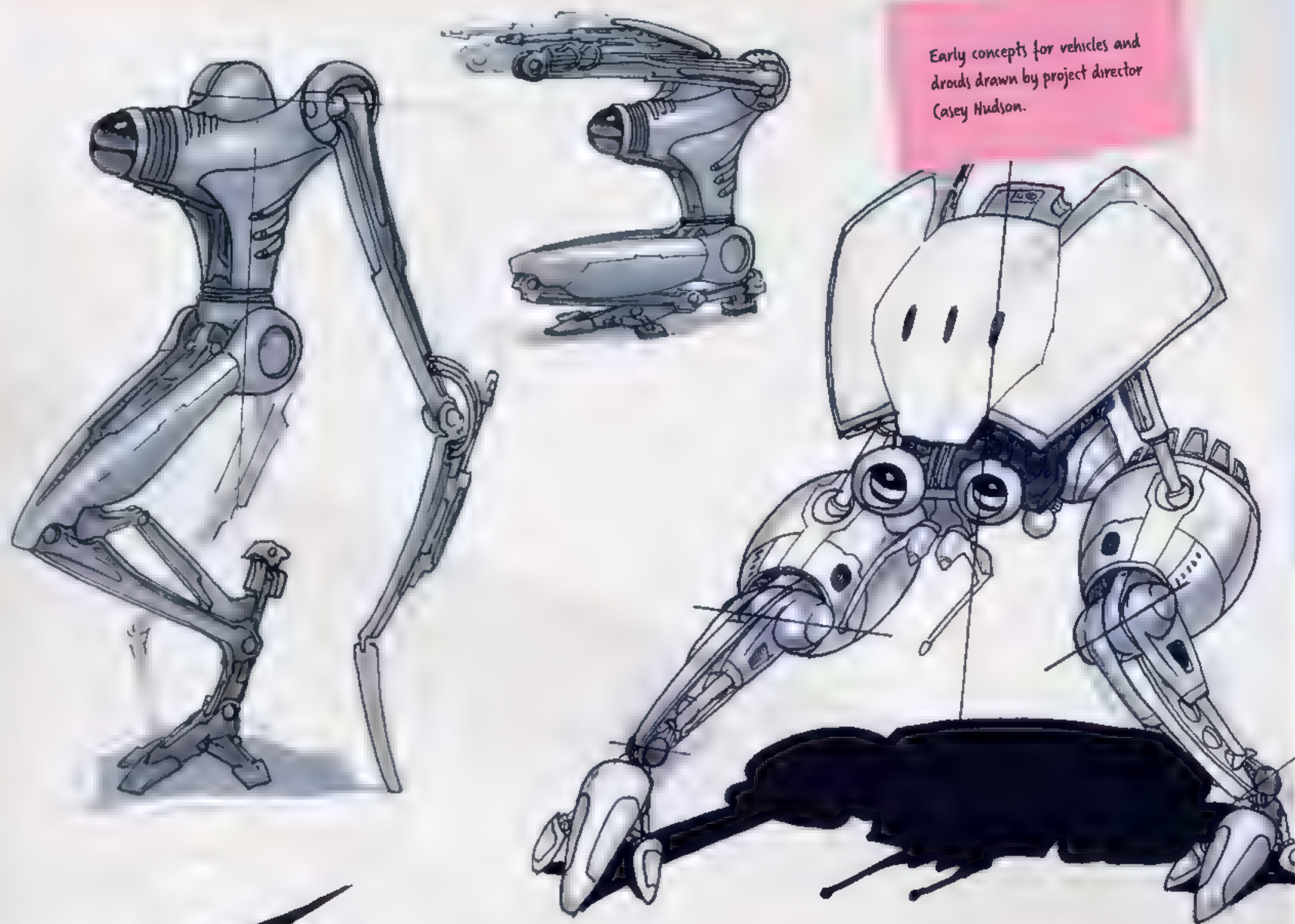
**Release:** *Star Wars: Knights of the Old Republic*  
**Priority:** 2 (Moderate)

**Description:** Players within sight of any enemy Sith are immediately Force choked. The issue has been isolated to a single conditional in some three thousand lines of Preston Watamaniuk's AI code: Is the player being choked? If not, choke the player.

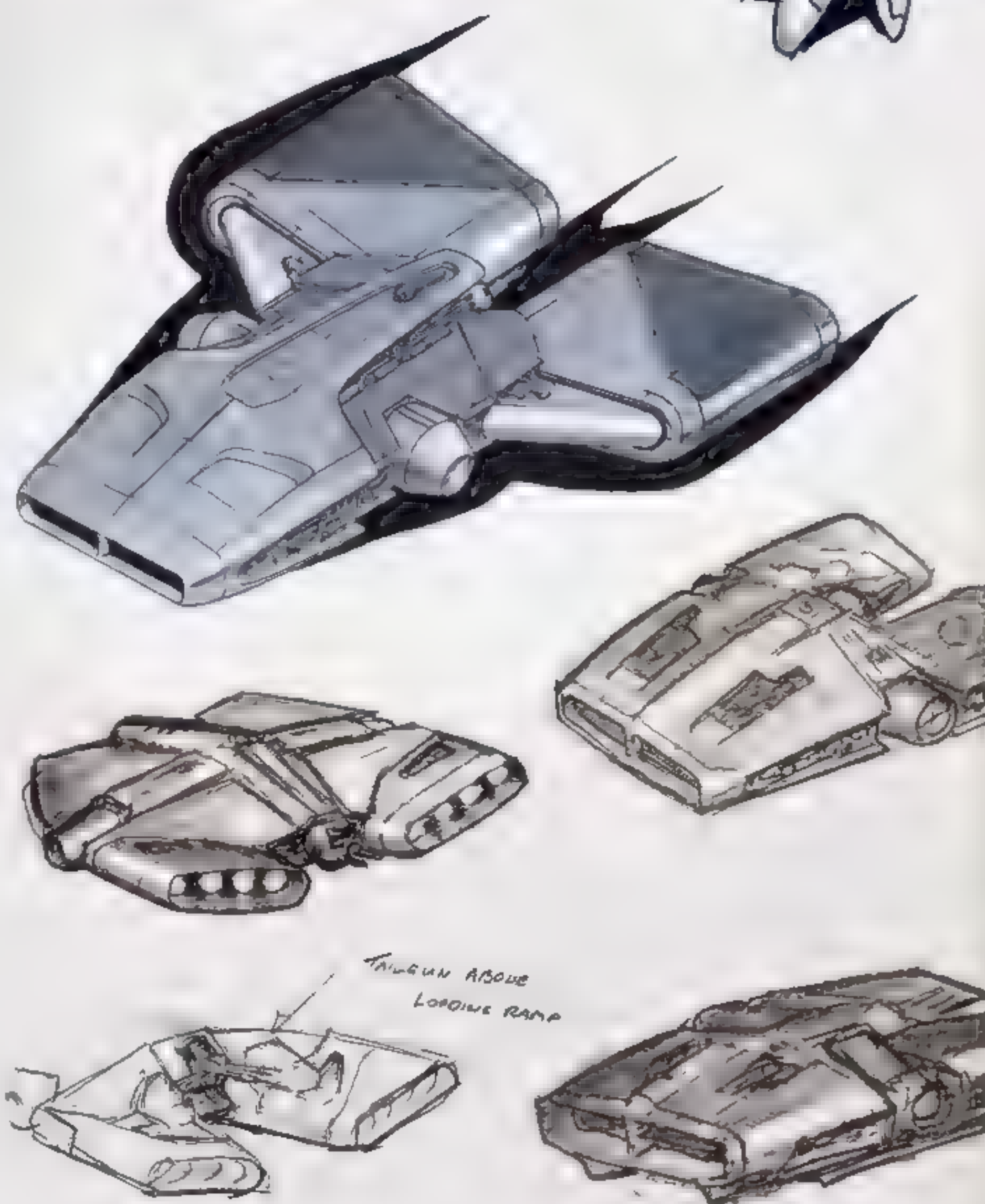
"It's really easy to kill the player. It's really easy to script an AI that just terminates the player with brutal efficiency," Preston says. "They were just assassins basically. Never mind if you had two. If you ran into two Sith, you were murderlated pretty fast. They'd just tag-team you and you were never able to not be choked."







Early concepts for vehicles and droids drawn by project director Casey Hudson.

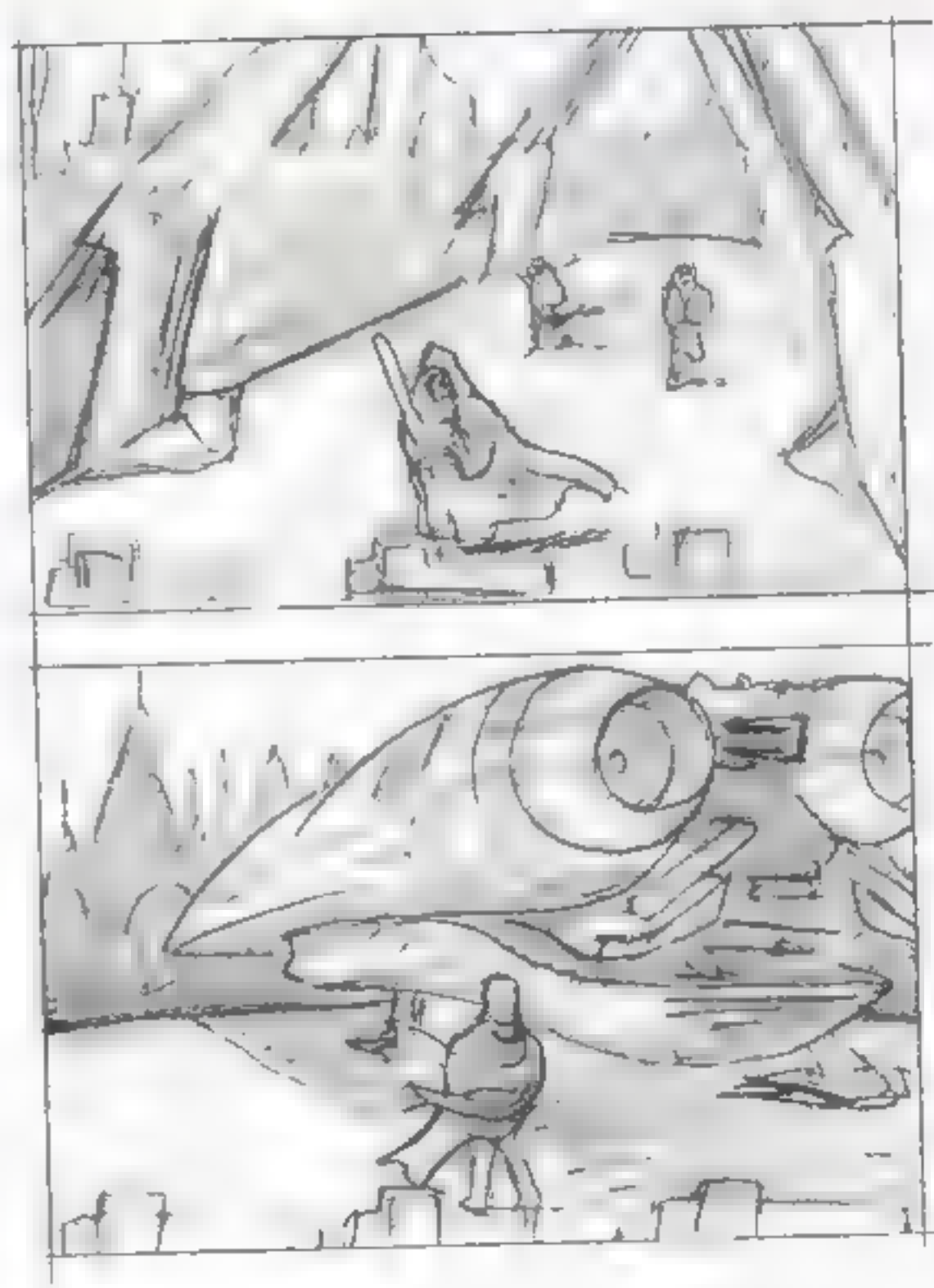
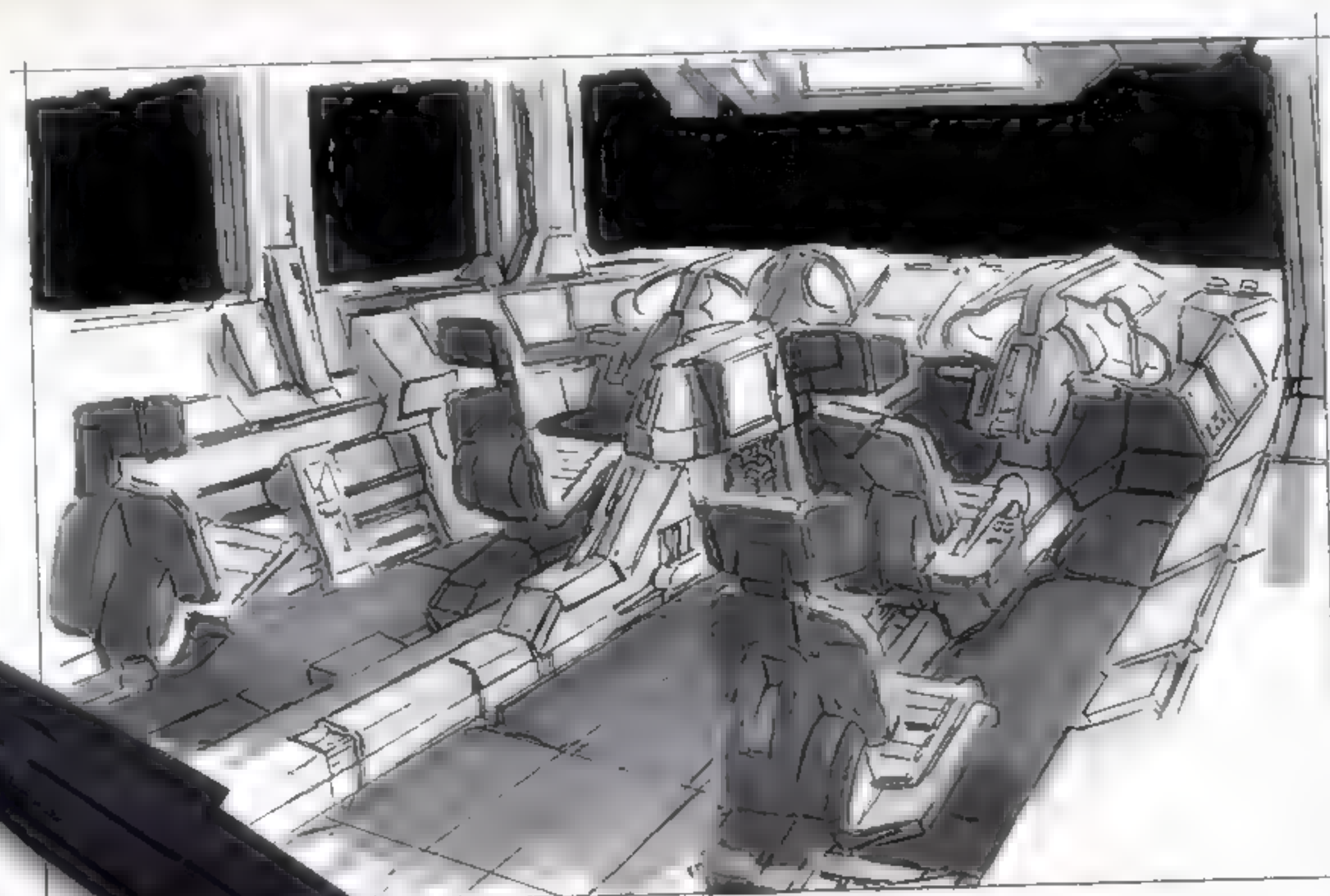
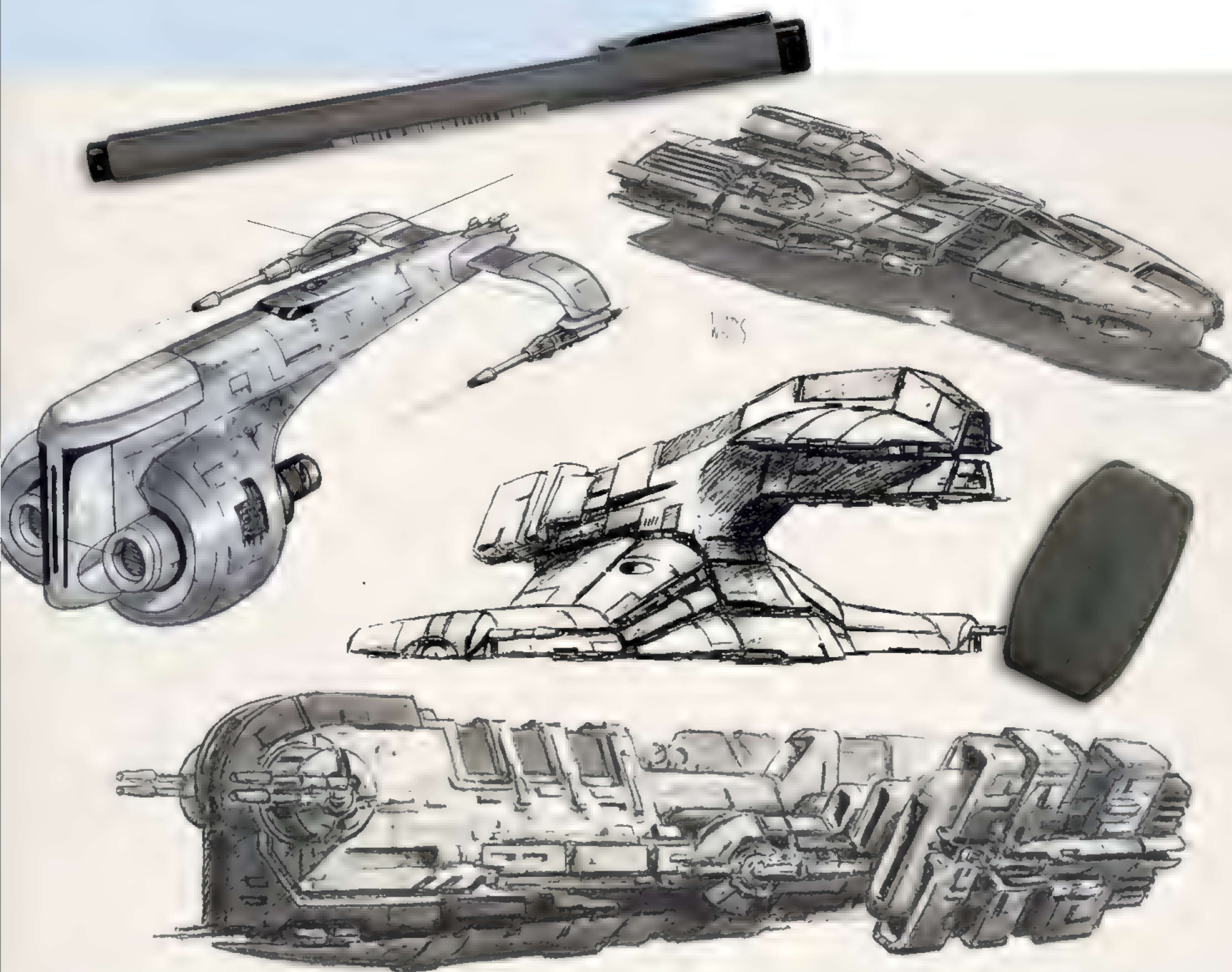


## KNIGHTS OF THE EPHEMERAL REPUBLIC

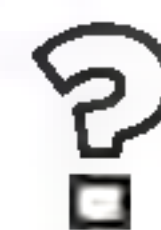
BIOWARE'S CONCEPT ARTISTS used to draw all their concepts on paper—until someone spilled coffee on a whole bunch and they lost some original pieces. They did their best to scan in approved pieces before something like that happened, but paper's tendency to rip, soak through, and otherwise get ruined is why some art created for *Knights of the Old Republic* and other games of the era was destroyed or lost. This includes the original concept for the game's infamous antagonist Revan.

"We realized pretty late in the game production that we would need to do a reveal scene of Revan's true identity," *KOTOR* director Casey Hudson says. "That meant we would need to show Revan in cutscenes. So we asked our lead character artist, Mike Spalding, to create the model, and when he asked for the concept we realized that we didn't have one yet. He sketched it on a piece of paper next to his keyboard and modeled the character from that. That sketch envisioned one of *Star Wars*' most notable characters, yet no one knows of its whereabouts. But there are rumors that it still exists, somewhere."









## BIO-TRIVIA

### KNIGHTS OF THE OLD

REPUBLIC'S JAMES WATSON

E3 DEMO WAS ACTUALLY A  
PROTOTYPE MADE IN MDK2

Every time you hear about Star Wars  
Knights of the Old Republic, it's from  
the MDK2 community. It's a good  
type of community, but it's a little  
apocryphal and campy. With so  
many players, it's a shame to  
MDK2's community, and it's a shame  
to the community, and it's a shame  
to the community.

We were in San Francisco and  
the community was a little  
apocryphal and campy. We were  
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We were in San Francisco and the  
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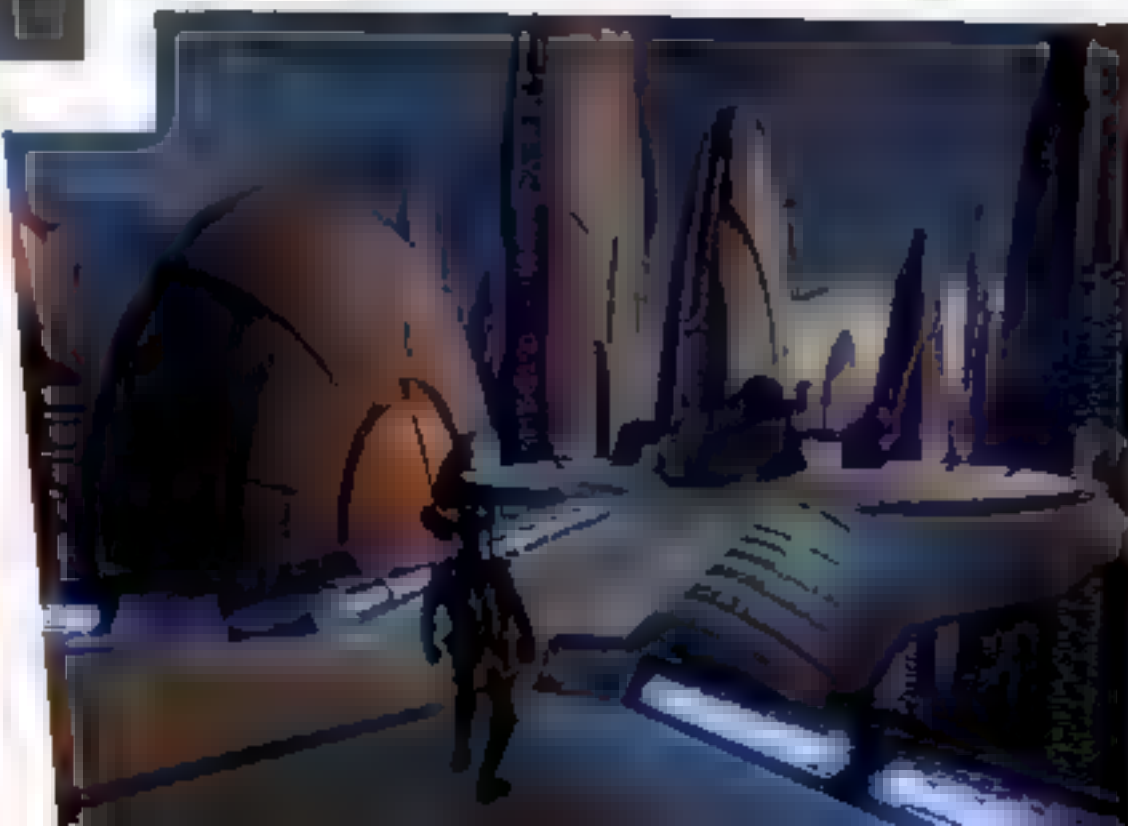
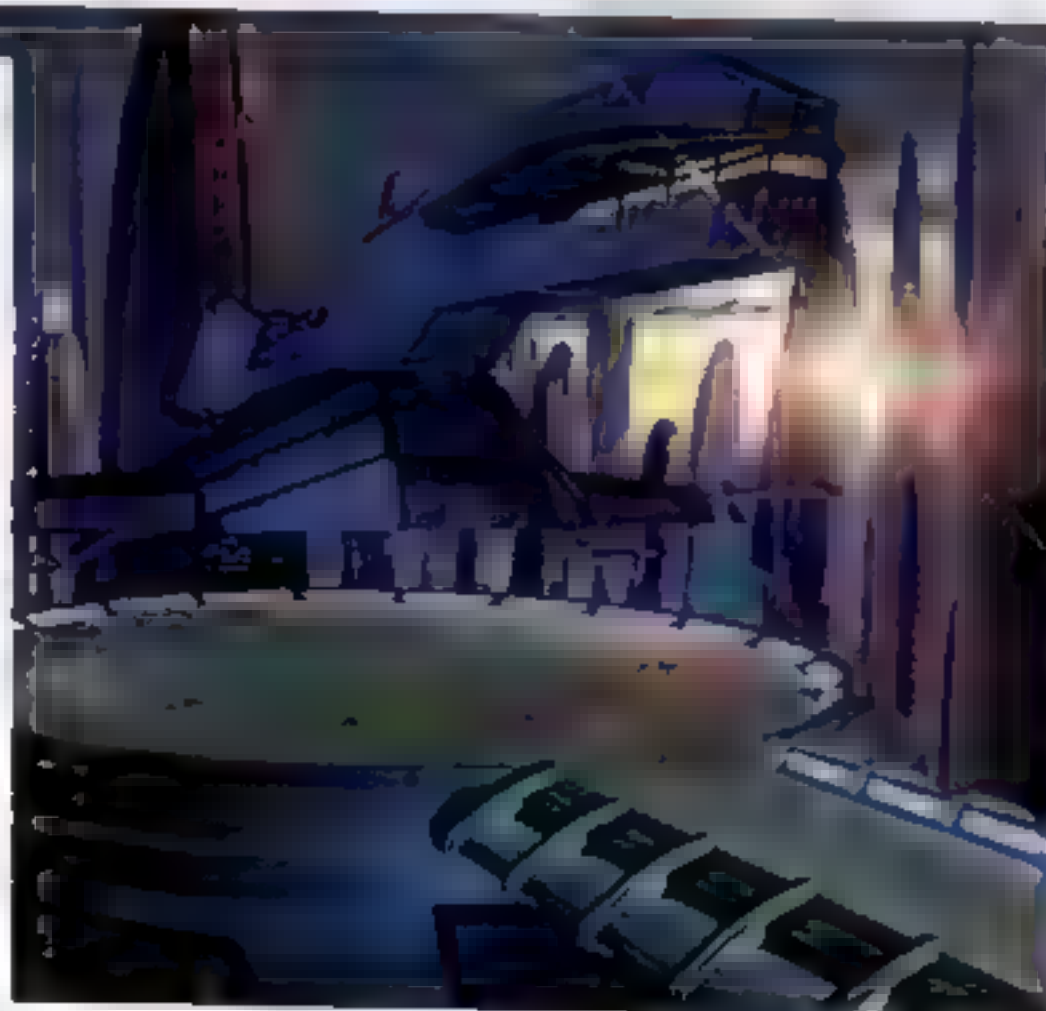
"And that's what we took to  
E3. It's the only way we could  
show off the kind of game that we  
wanted to make."

The demo was a little bit  
apocryphal and campy. It was a  
little bit apocryphal and campy.  
It was a little bit apocryphal and  
campy. It was a little bit apocryphal  
and campy.

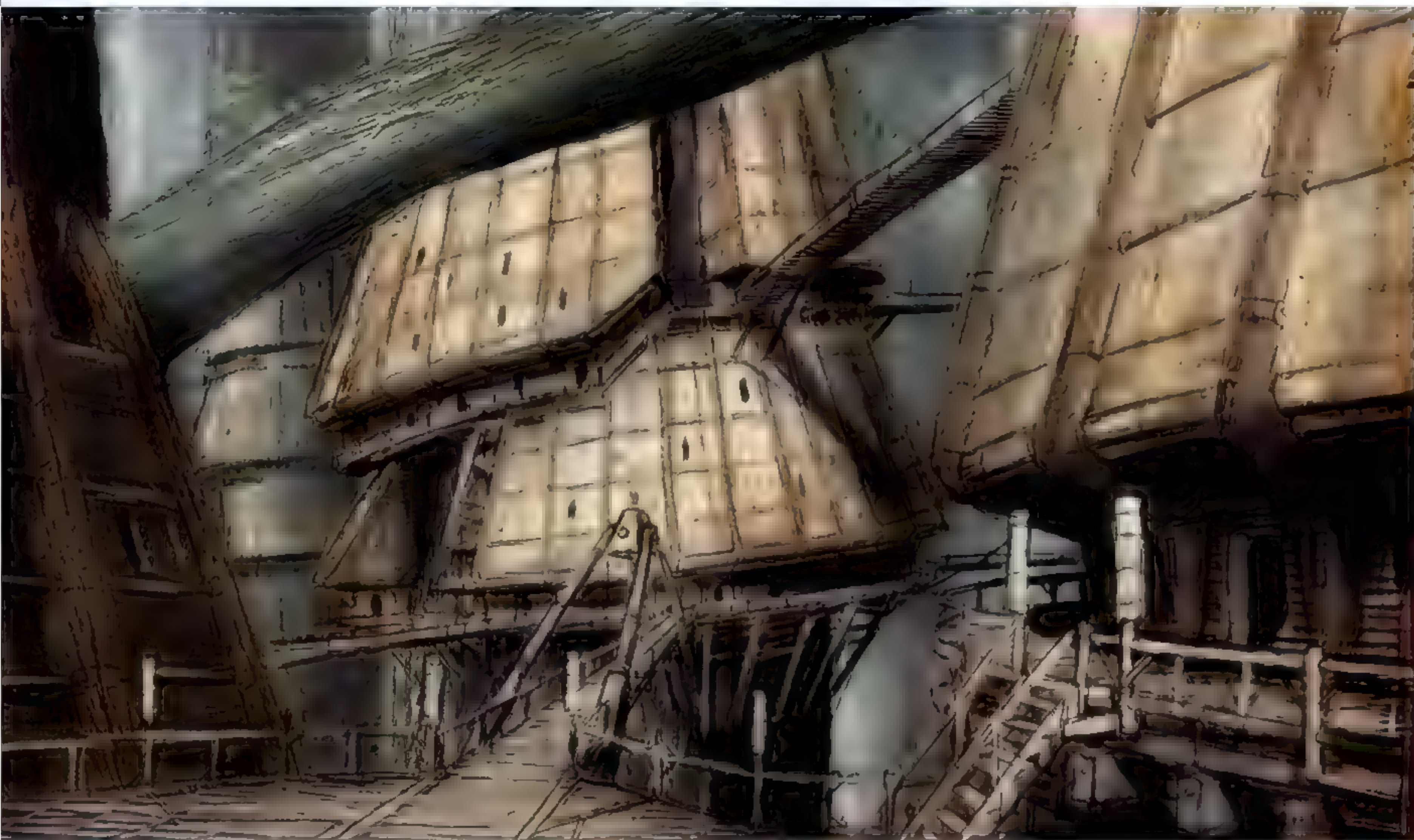
The demo cut in, impressive, but  
it was a little bit apocryphal and  
campy. It was a little bit apocryphal  
and campy. It was a little bit apocryphal  
and campy.

"Because we only have a few  
things that we can show. We can  
show a few things that we can show.  
We can show a few things that we  
can show. We can show a few things  
that we can show. We can show a  
few things that we can show."

Jeff Strickland's financial KOTOR  
was in MDK2







## LUKE KRISTJANSON'S WOOKIEE CHEAT SHEET

WHEN YOUR GIANT HAIRY aliens come from a planet called Kashyyyk and speak in something between a purr, a gargle, and a howl, the names are gonna get pretty bogged down in consonants.

Writer Luke Kristjanson kept a running list of Wookiee names taped to his monitor as he worked on *Knights of the Old Republic* just to keep the spellings straight.

"Because I made them up and then I couldn't remember them," he says.

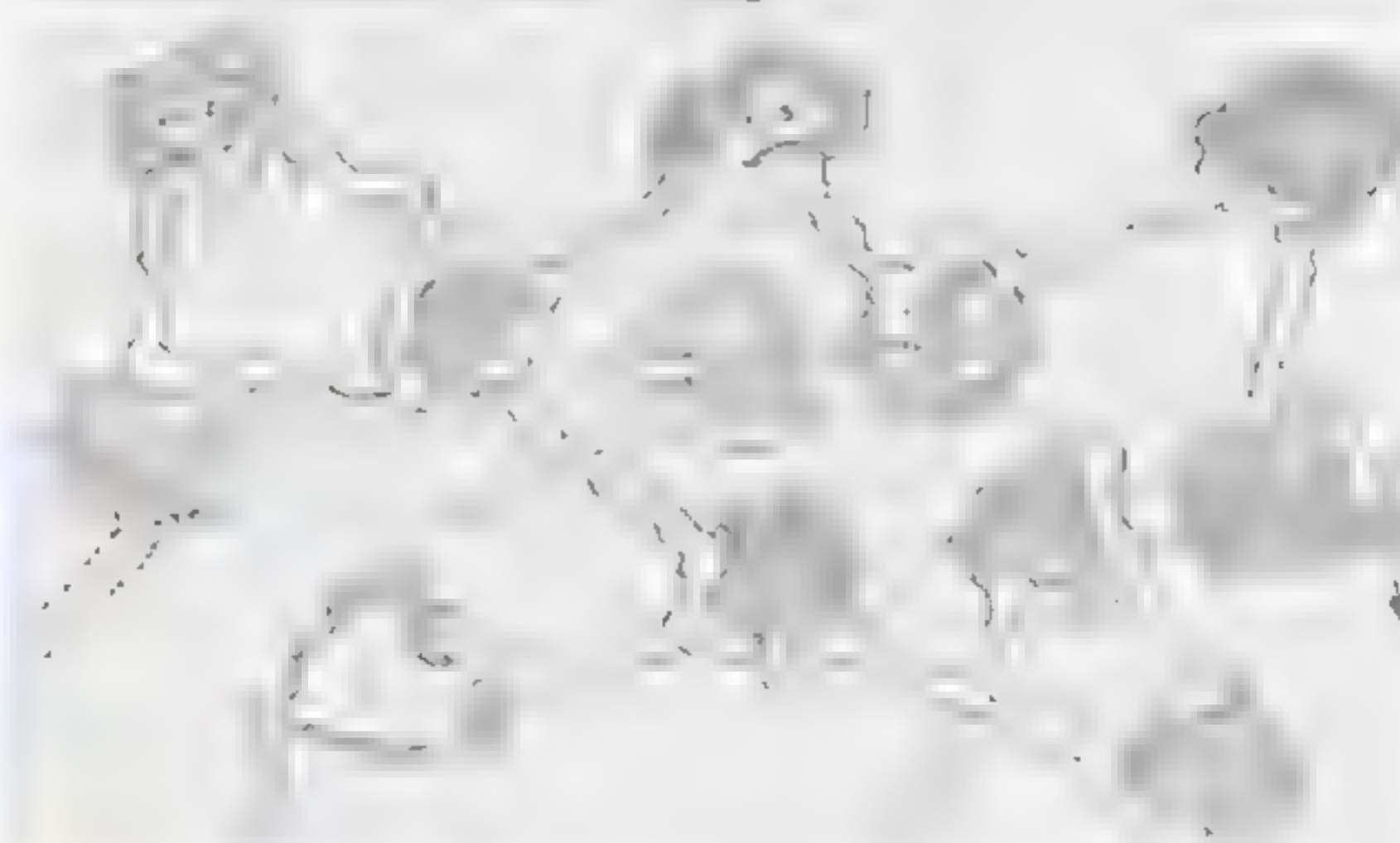
Internal design documentation with rough maps helped *Knights of the Old Republic* developers chart complex missions in the densely forested Wookiee home world of Kashyyyk.

**CHUUNDAR:** current leader  
**GORWOOKEN:** lackey  
**ZAALBAR:** party wookiee  
**FREYYR:** old leader  
**WORROZNOR,** Holder of the Laws: cop  
**RORWORR:** dead wookiee  
**WOORWILL:** dead wookiee fan  
**JAARAK:** dead wookiee killer  
**JANOS WERTKA:** Ithorian  
**G567890, EDEAN:** corp. name for Kashyyyk  
**CZERKA CORP.:** occupying company

**KATARN:** big meaty creatures  
**KINRATH:** big bugs  
**TACH:** little monkeys  
**ULLER:** special little monkey

## MODULE 24 – KASHYYYK: SHADOWLANDS LEVEL ONE

SHADOW LANDS LEVEL ONE



### Plot Breakdown

All mention of trouble translating the wookiee-speak is to be ignored. The player will simply understand what is said, even though the audio for the creatures will mostly be growls and such. It is assumed that they have received training to understand the different languages by use of force sensitivity or some such.

**24.01 Entrance to the Shadowlands:** When the player uses the basket elevator to reach the Shadowlands, this is where he'll end up. The first time the player arrives and has Zaalbar in the party, he will find a small wookiee war band led by Gorwooken waiting for him. Gorwooken will tell Zaalbar that he should not have come back. The band will then attack the player.

Gorwooken appears here with the player after the player met him in the previous area. Gorwooken will operate the basket as long as the player goes along with Chuundar's orders.

If the player kills Freyyr:

- Gorwooken will be here when they return and operate the basket. The player will then automatically appear in Chuundar's throne room, not having to needlessly walk there.
- Gorwooken will appear in the throne room as well.
- Player will thereafter be able to operate the basket himself, as they may still need to return to the shadowlands for the starmap.

If the player promised to help Freyyr and gave him the pieces of the sword:

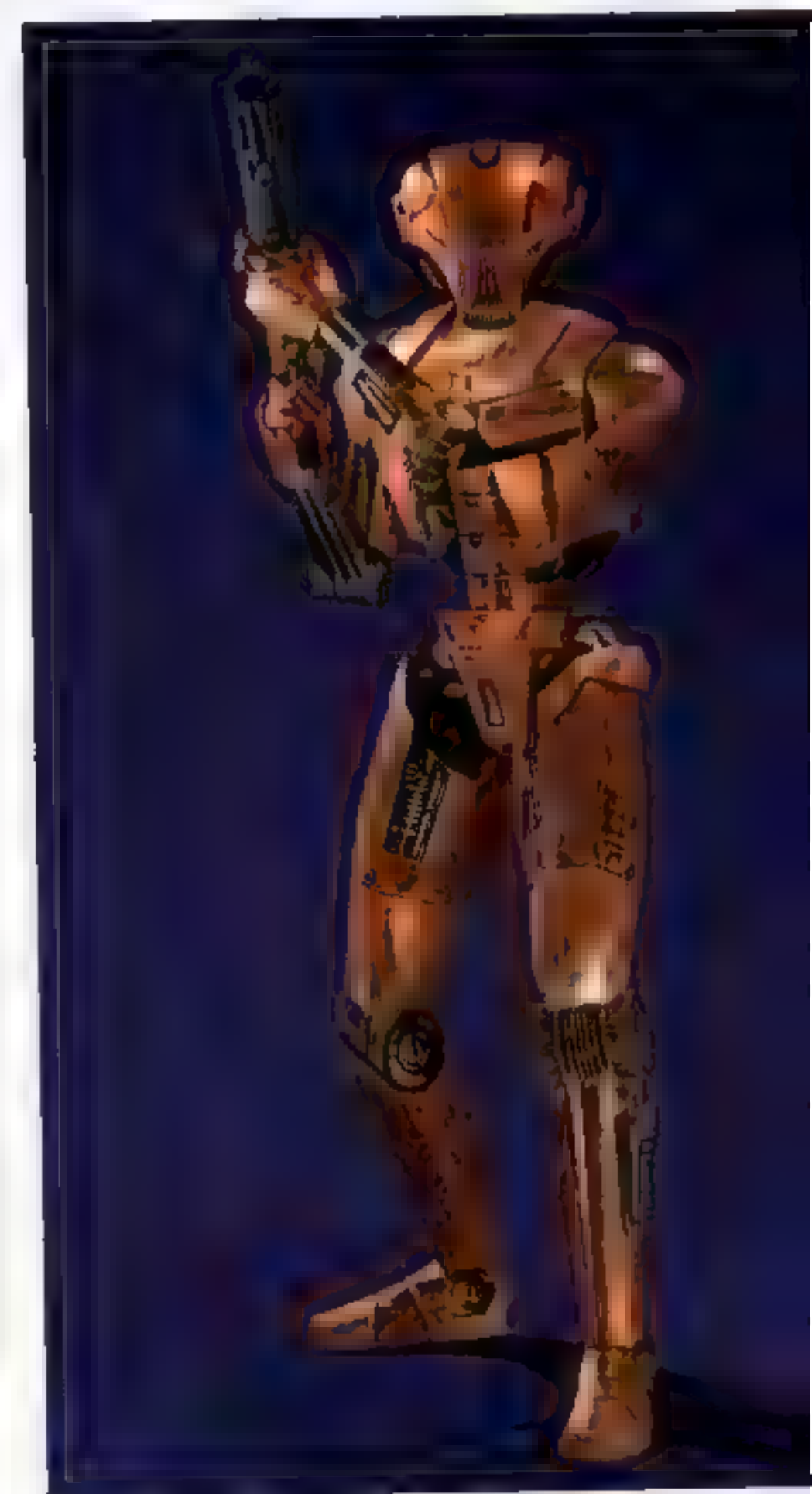
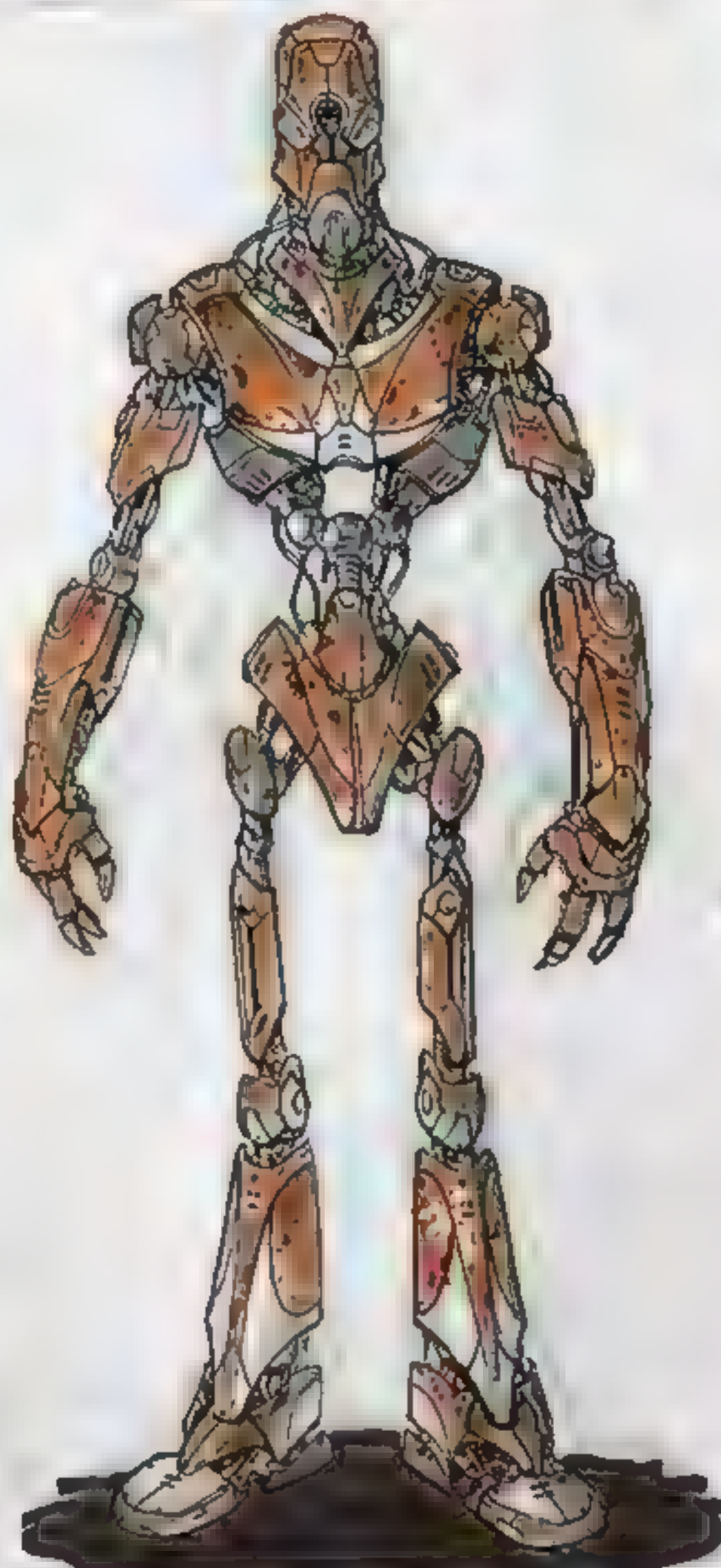
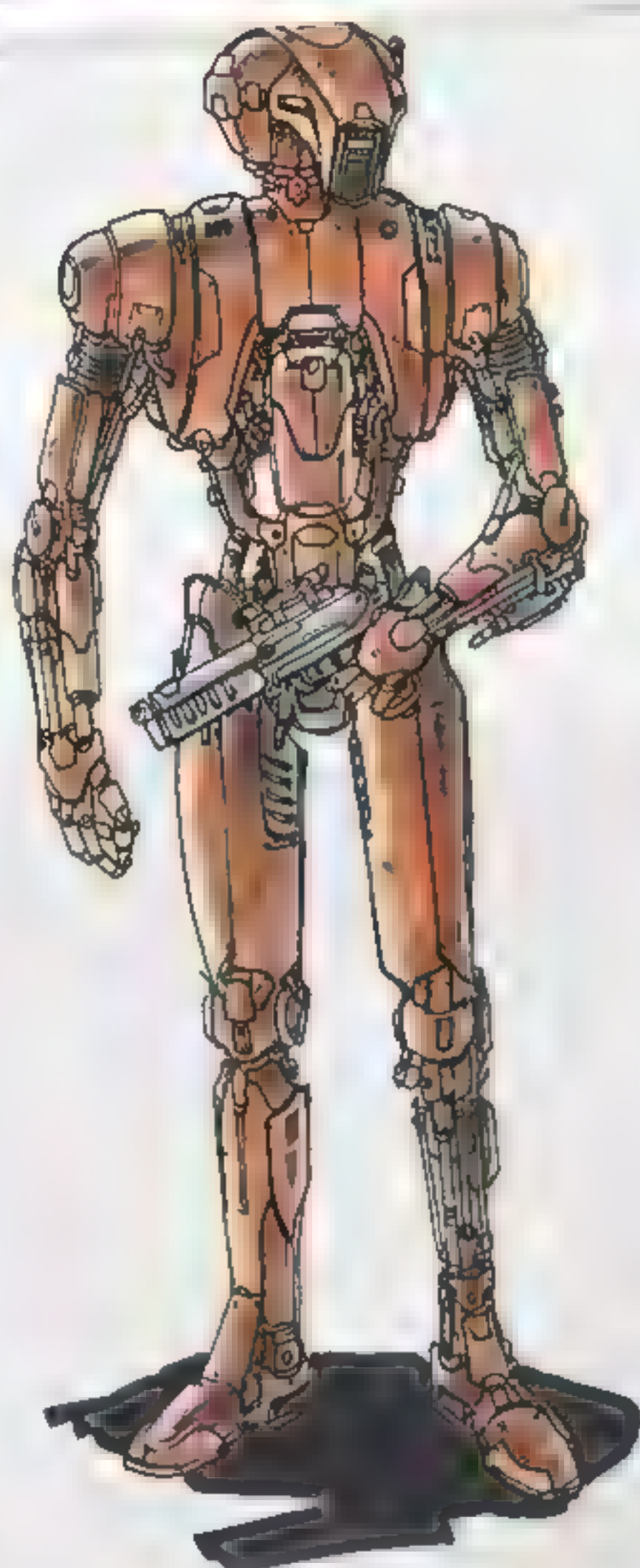
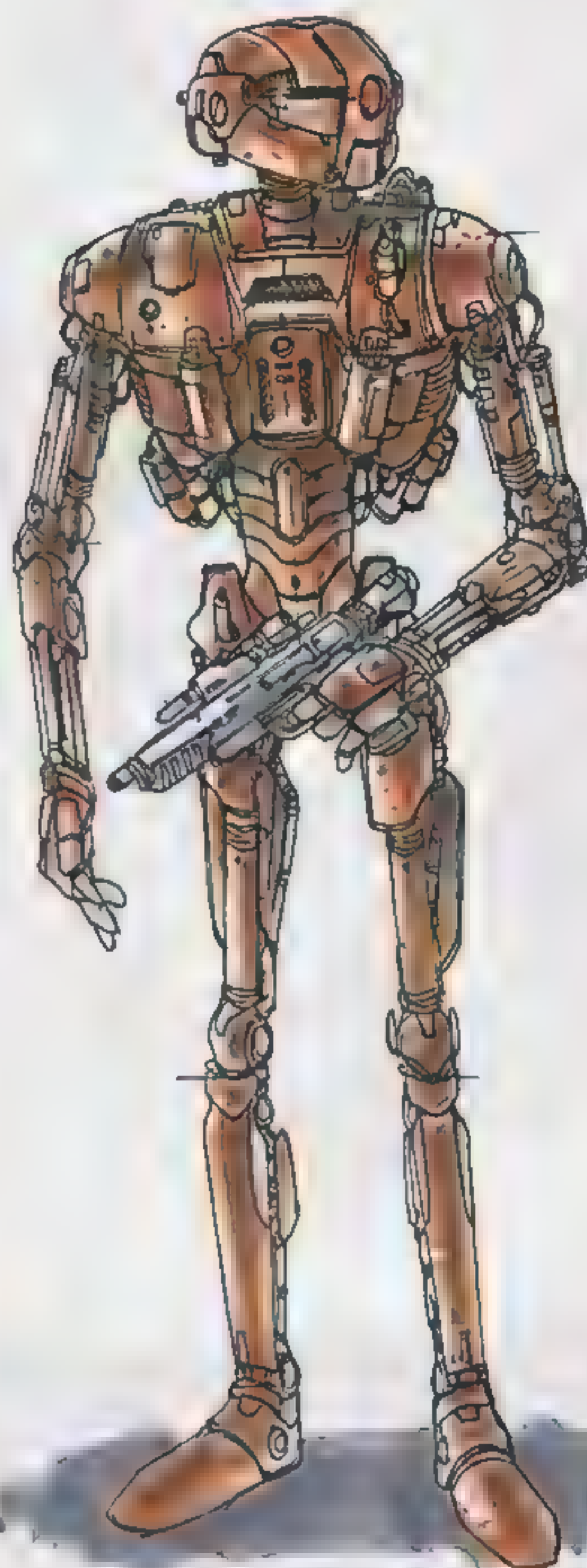
- Gorwooken awaits them at the basket, telling them they should have obeyed Chuundar, and then attacks.
- Player makes his way back to the village where the guards outside of Chuundar's door are gone. Player can now enter to challenge Chuundar with Freyyr.

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## BIOWARE MEATBAGS CREATE BELOVED, EVIL DROID

THE INITIAL PLAN FOR HK-47 had the charismatic murder droid not speaking a word.

But when writer David Gaider finished his other followers ahead of schedule, lead designer James Ohlen wondered if maybe it would be a good opportunity to give HK a tad more personality.

"I was kind of cheesed that it was dumped on my lap because I had finished early," David says. "I had literally no plan and I was at home when I was reminded of *The Littlest Hobo*."

Canadians of a certain age tend to have a soft spot for the TV show, about an eponymous dog that travels from owner to owner, improving their lives in some way before moving on to the next.

David's pitch for HK-47: "What if the Littlest Hobo

was evil, and he traveled from owner to owner orchestrating their demise?"

David was particularly interested in a droid who was disgusted by humans. All that water sloshing around inside us. Why?

"I wrote him in a week. I didn't think anything of it," David says. He wasn't sure anyone would like the droid. "But when we got the first stuff for HK-47 back, the voice actor had taken it and really transformed it. He decided to give it this sneering apathy and I thought, 'Oh, that's excellent.'"

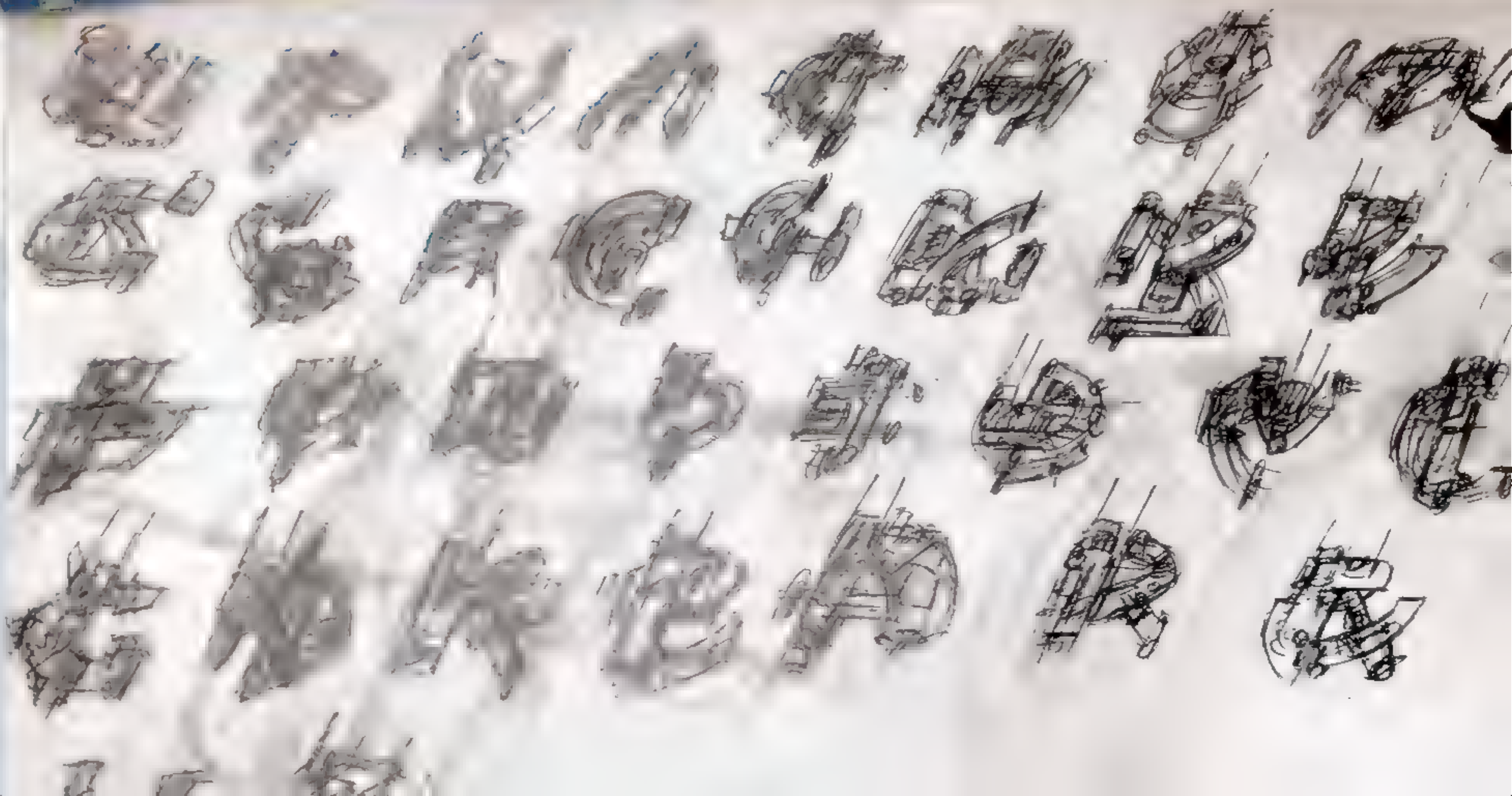
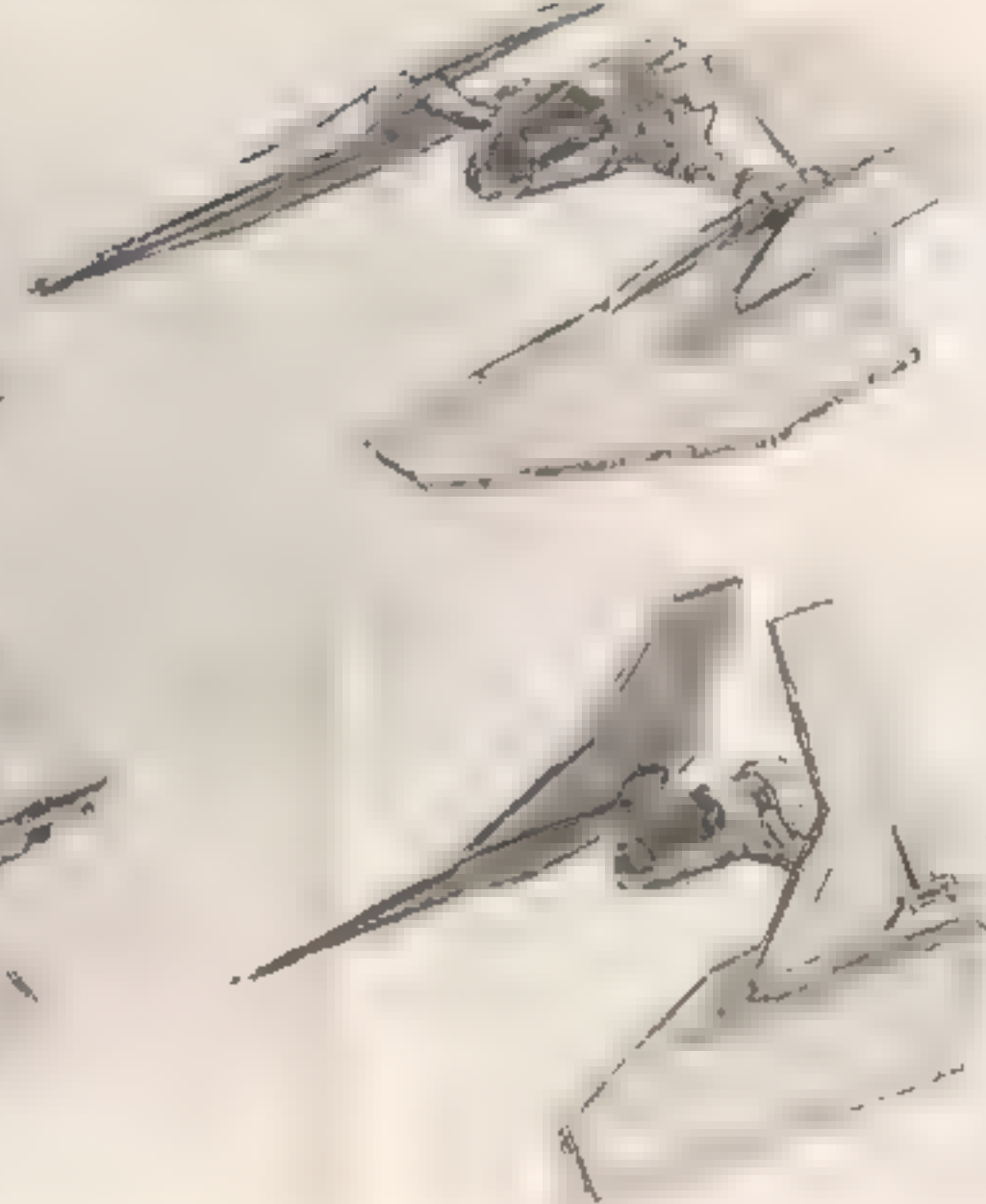
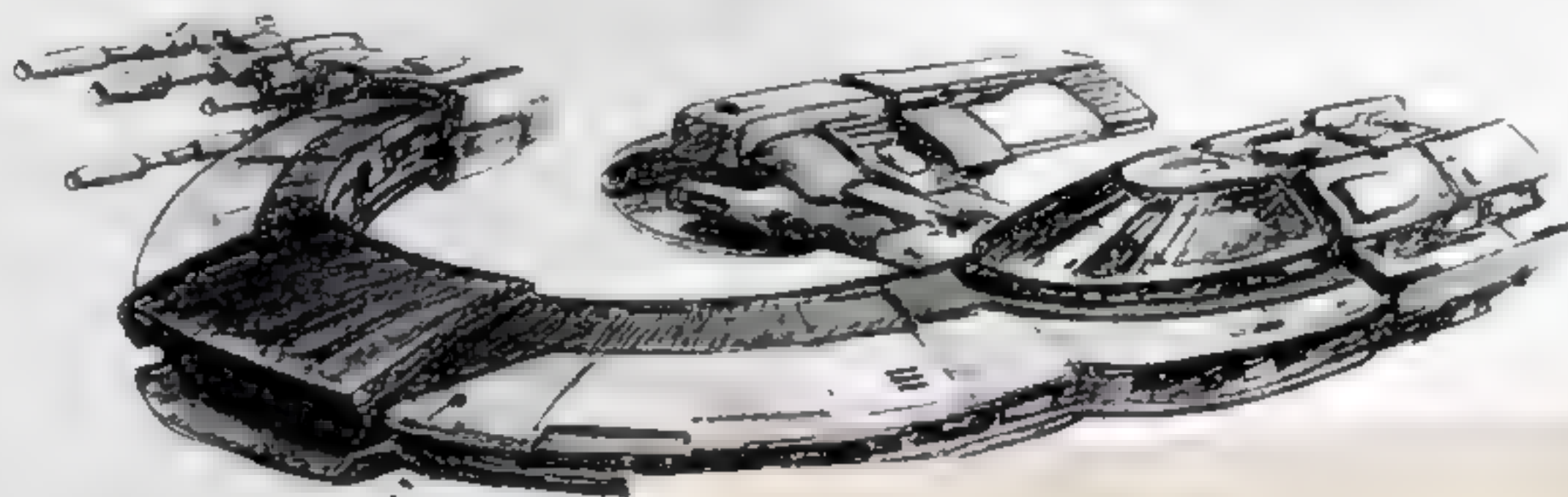
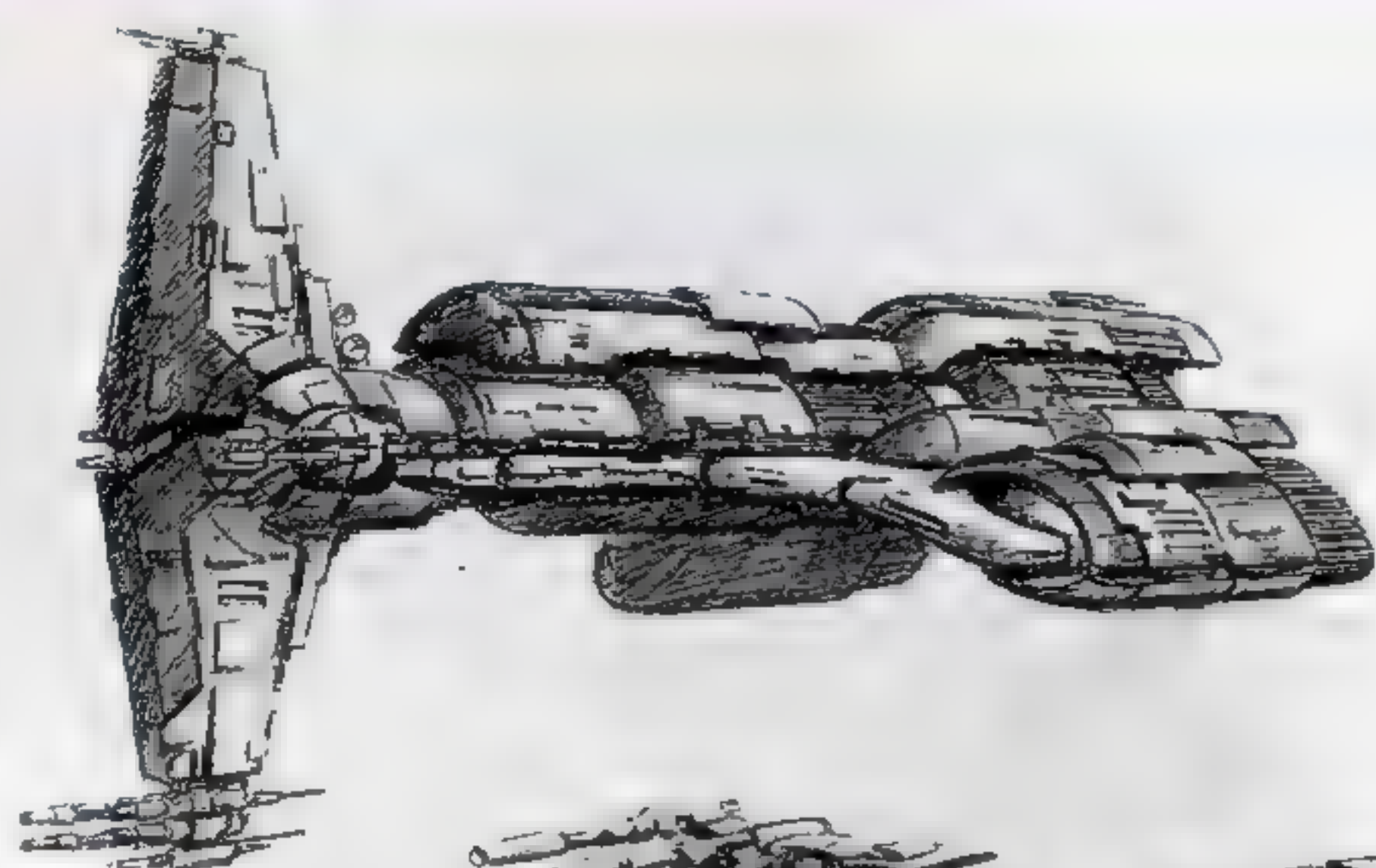
HK-47 became one of *Knights of the Old Republic's* most memorable characters and arguably one of *Star Wars'* most popular droids—all because David Gaider had some free time.



## ALL THE SHIPS OF THE ALPHABET

TAKING INSPIRATION FROM established ships in the *Star Wars* universe like the A-wing, X-wing, and Y-wing, art director Derek Watts designed new ships for *Knights of the Old Republic* based on letters of the alphabet, including the *Ebon Hawk*, which started out as a G.

Longtime BioWare artist John Gallagher ran with this idea to its logical conclusion, trying out ship designs for every letter of the alphabet. Here are a few favorites Derek held on to.





## AN ENTIRE PLANET, GONE JUST LIKE THAT

**SOMETIMES GAME DEVELOPERS** have to cut significant pieces of content during development to focus on improving the rest of the game. In the case of *Star Wars: Knights of the Old Republic*, an entire planet called Sleheyron was cut from the game.

"It was this industrial planet with all these kind of rusty metal buildings," art director Derek Watts says.

First drafts of Sleheyron's content were written, including a main plot involving Hutts, but designers had yet to implement the quests before the planet was cut.

The scope of Sleheyron's content was roughly the same as Korriban's, Sleheyron's writer, David Gaider, says.

"The plot was very intricate in that there were three main Hutt characters that you could play off against each other."

Below are notes on the cut planet excerpted from *Knights of the Old Republic's* internal design documents.

### SLEHEYRON

**SYSTEM:** Sleheyron System

**TERRAIN:** Cityscape

**SPECIES:** Human, humanoid alien, Hutts

**LANGUAGE:** Basic

**POPULATION:** 25 billion

**IMPORTS:** Technology and luxury items

**EXPORTS:** Tibanna gas, iron, machinery, starships.

#### LEGAL DIFFERENCES:

The Hutt rulers can enslave any creature on Sleheyron, except for those who are already owned by another Hutt. Only the landing zones where outer world trade takes place are considered safe.

Killing a slave is considered vandalism, and the offender must compensate the Hutt slave owner for his loss.

The planet of Sleheyron is one of the most industrialized worlds in the galaxy. It is a world paved over with layer upon layer of gas refineries, landing bays, slave pens and ship construction yards. Most of the planet's population live as slaves under the thumb of the Hutts. They toil away in factories that churn out starships and tibanna gas.

The atmosphere of Sleheyron is so polluted that most slaves usually don't live past the age of thirty. The Hutts are the rulers of Sleheyron, although only a couple hundred of the slug like aliens live on the planet. Each Hutt possesses a large slave population, as well as droid servants and droid soldiers. They also employ humanoids as servants, guards, enforcers and slave masters.

#### OUTWORLD ZONE

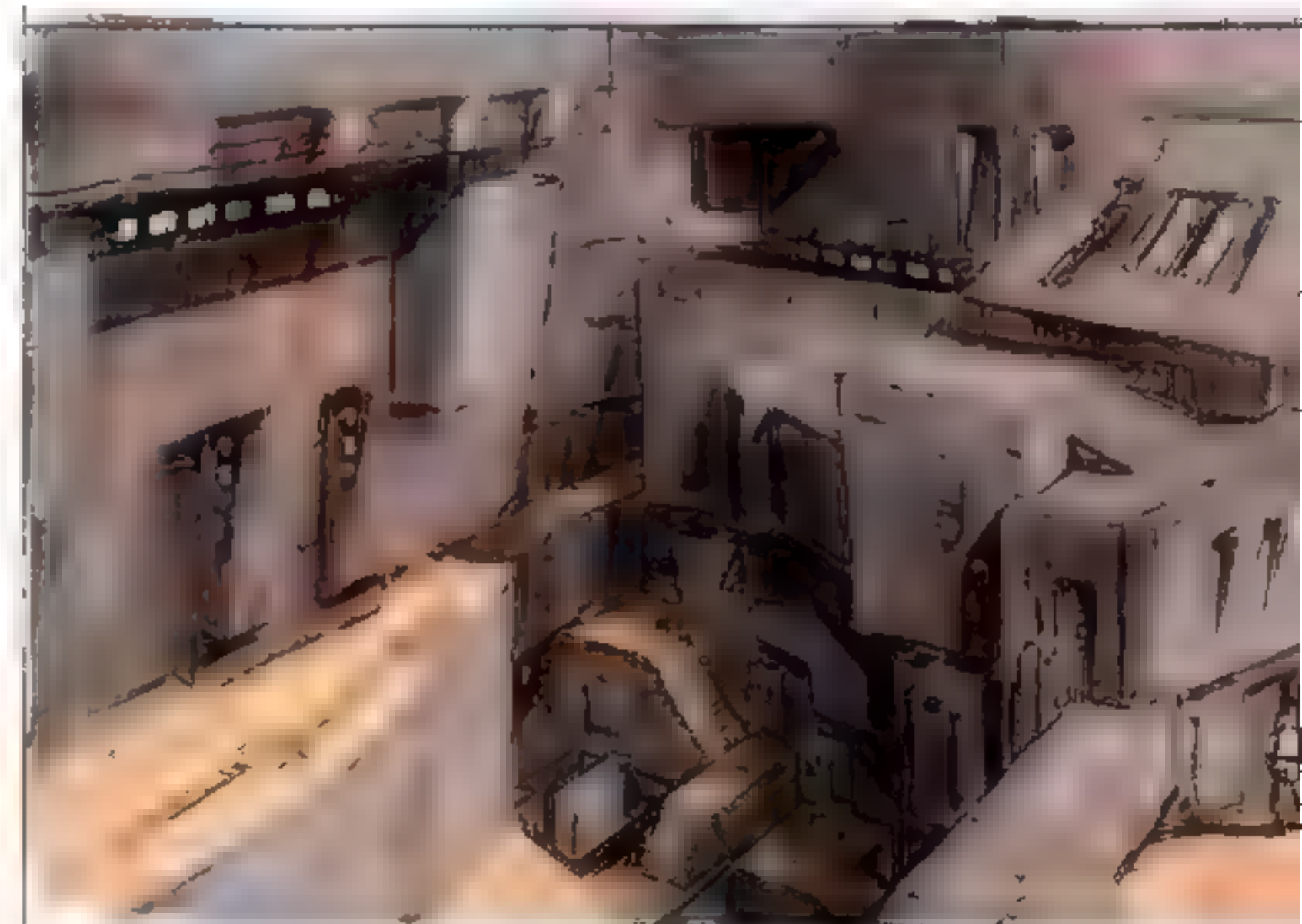
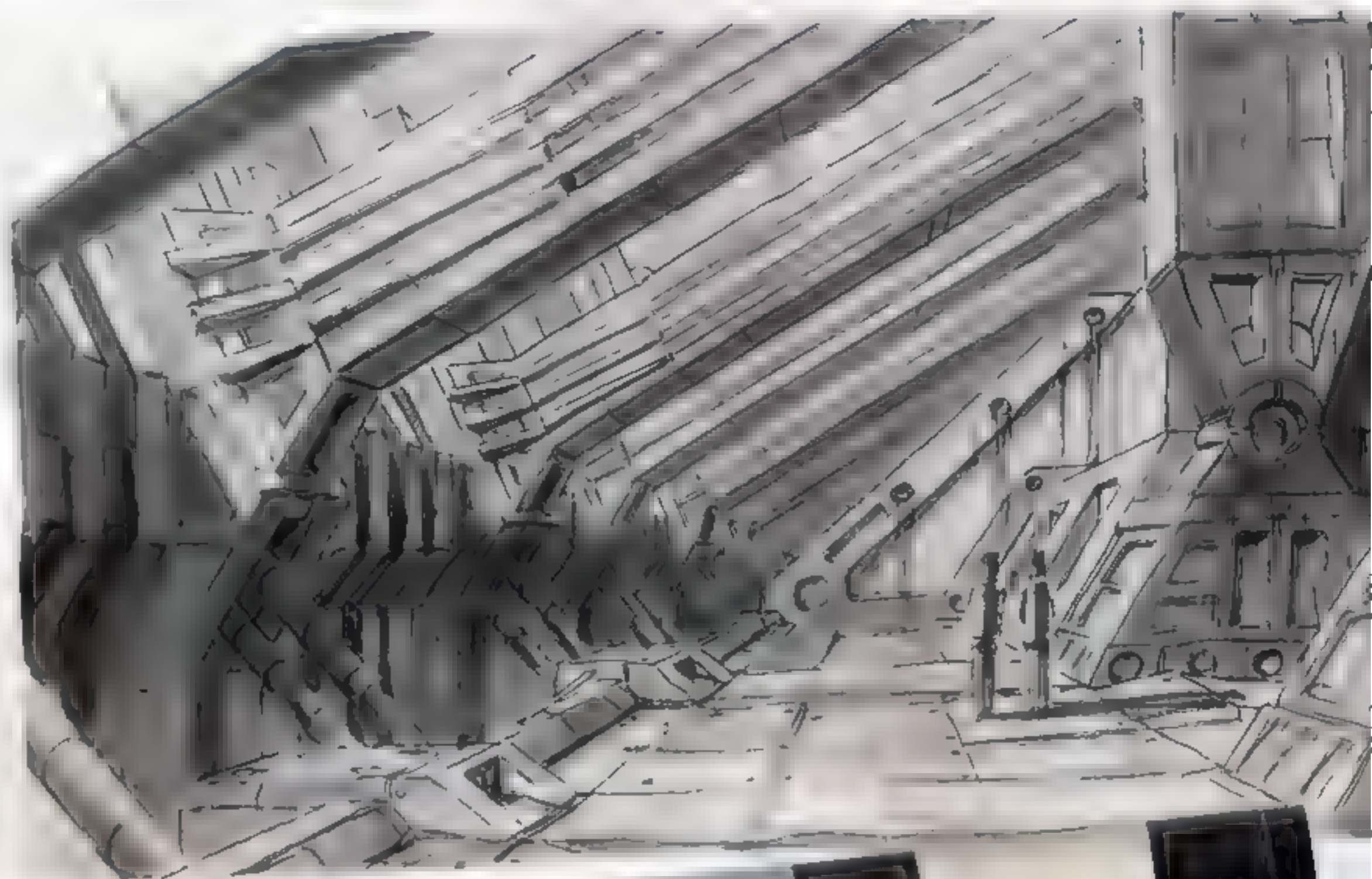
This zone of the planet is where traders and smugglers come to do their business with the Hutts. The zone is the only safe zone for off worlders. Anyone leaving the zone can be expected to be enslaved by the Hutts.

#### THE GRAND ARENA

A mammoth building more than a mile in diameter. The Hutts send their warrior slaves here to fight in gladiator matches. Tens of thousands of people come to view these bloody matches, and the noise that they generate can be deafening.

#### THE OBSIDIAN PRISON

Those who break the laws of Sleheyron are sent to the Obsidian prison, a massive structure constructed from huge slabs of polished obsidian. The prison is mostly unregulated, so the strong prisoners rule over those weaker than themselves. Prisoners who prove to be exceptional combatants can often be promoted to one of the Hutts' gladiator stables.





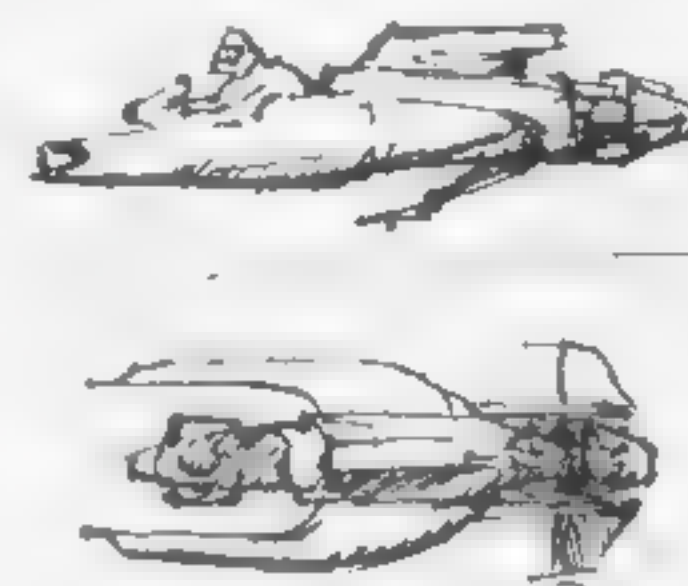
## CASEY HUDSON'S SWOOP RACE NOTES

**STAR WARS: KNIGHTS OF THE OLD REPUBLIC** included a swoop racing minigame on the desert planet of Tatooine. The gameplay marked BioWare's first foray into vehicular racing. Here are some key points excerpted from project director Casey Hudson's initial bulleted notes on the segment:

- Swoops are 6-stage jet engines with a seat, like a Harley.
- Race is a straight-line drag for time. You collect power-ups to get "fuel" to kick in the next stage.
- You bust through the stages and each stage kicks you into a higher speed.
- Cool F/X on each shift and engine stage.
- Also has obstacles to hit—instant death. And explosion.
- Press X to shift!

### Swoop Race

- HAS A FEEL LIKE HOW IT FEELS DAY AT THE DRAG STRIP.
- SWOOPS ARE 6-STAGE JET ENGINES WITH A SEAT, LIKE A HARLEY.
- RACE IS A STRAIGHT-LINE DRAG FOR TIME. YOU COLLECT POWER-UPS TO GET "FUEL" TO KICK IN THE NEXT STAGE.
- YOU BUST THROUGH THE STAGES, AND EACH STAGE KICKS YOU INTO A HIGHER SPEED.
- COOL F/X ON EACH SHIFT AND ENGINE STAGE.
- ALSO HAS OBSTACLES TO HIT - INSTANT DEATH, AND EXPLOSION.
- PRESS X TO SHIFT!
- REFER TO SNEK SWAN SL GAME
- TRACK IS A STRAIGHT-LINE SCRAM OF COPIED RIGGS - OR, A LINE-OF-ON PLANE.
- OBSTACLES ARE ALL THE WAY.



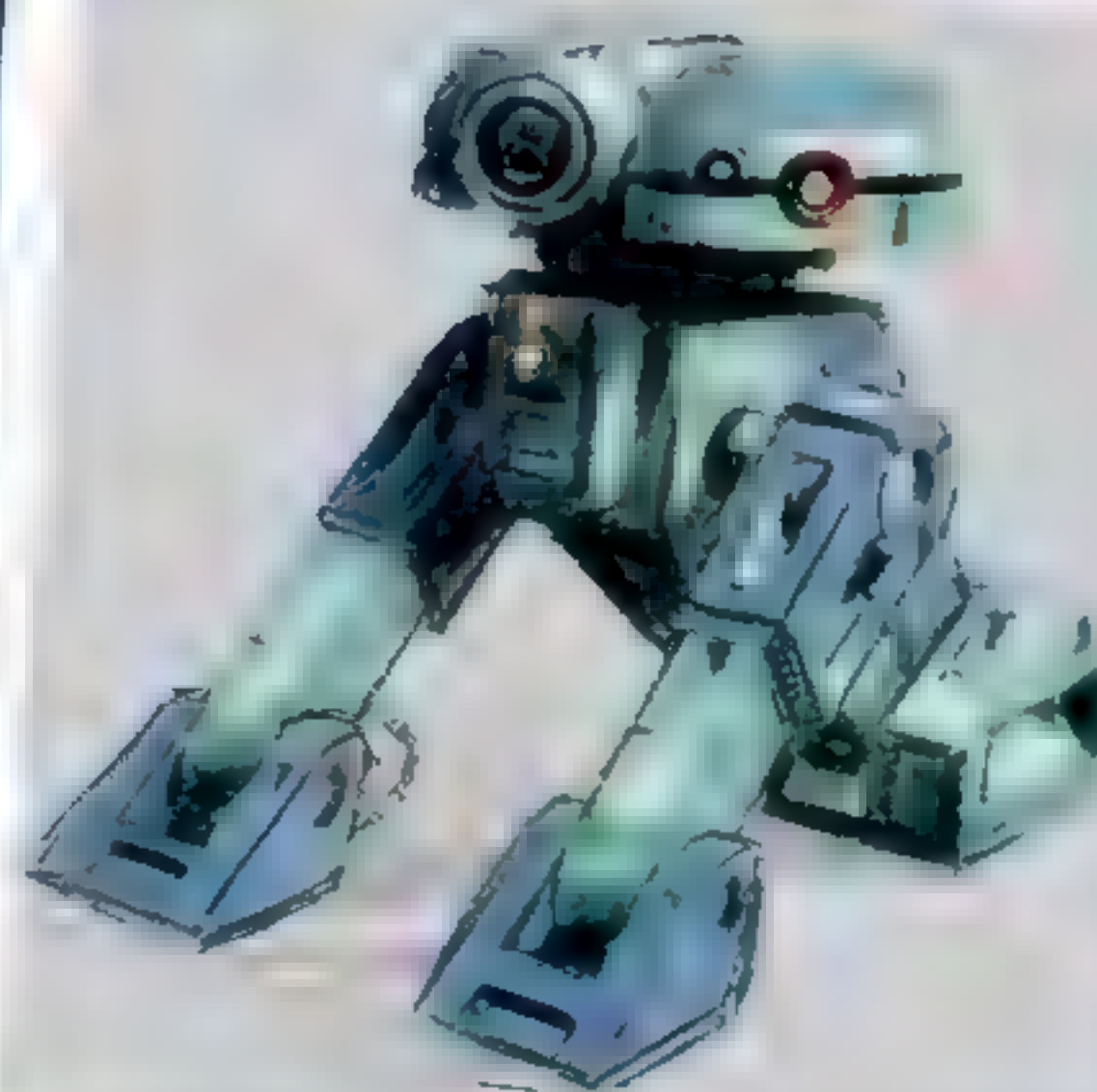
### BUG REPORT: TEENY, TINY T3

**Release:** *Star Wars: Knights of the Old Republic*  
**Priority:** 1 (Severe)

**Description:** Initially, the *Knights of the Old Republic* team experimented with assets in MDK2's Omen engine before switching to the studio's newer Aurora engine. Casey Hudson remembers trying to import a model of the adorable droid T3-M4 into MDK2 early in development. The droid immediately disappeared.

They tried everything to figure out why T3 wouldn't appear in the engine. Then Casey used MDK2 protagonist Kurt Hectic's sniper view to zoom way, way into a texture where the droid should have been standing.

"And down there, about the size of a grain of sand, was our little droid. The scale was off by probably about a thousand to one," Casey says.



## MODULE 17 – TATTOOINE: ANCHORHEAD

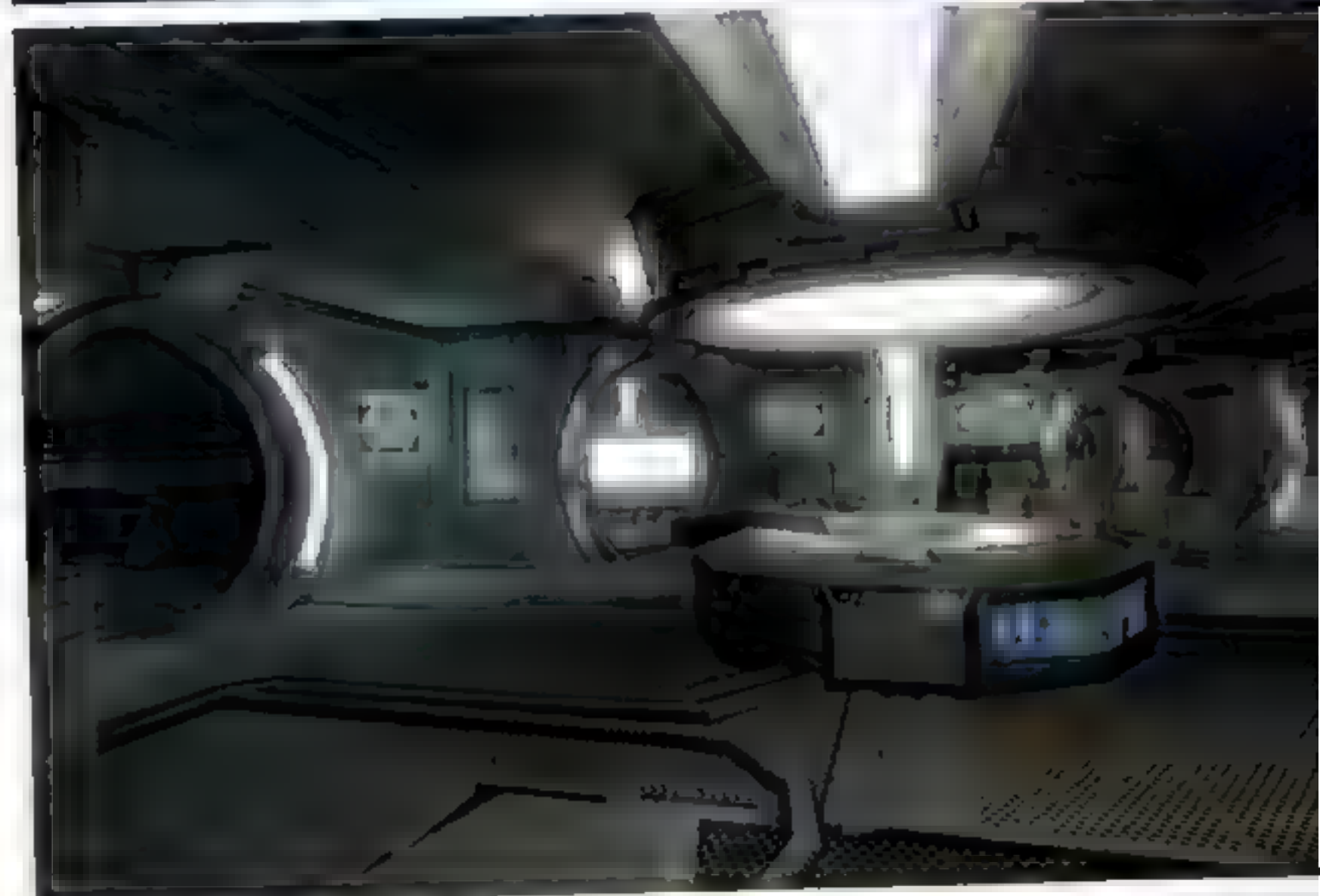
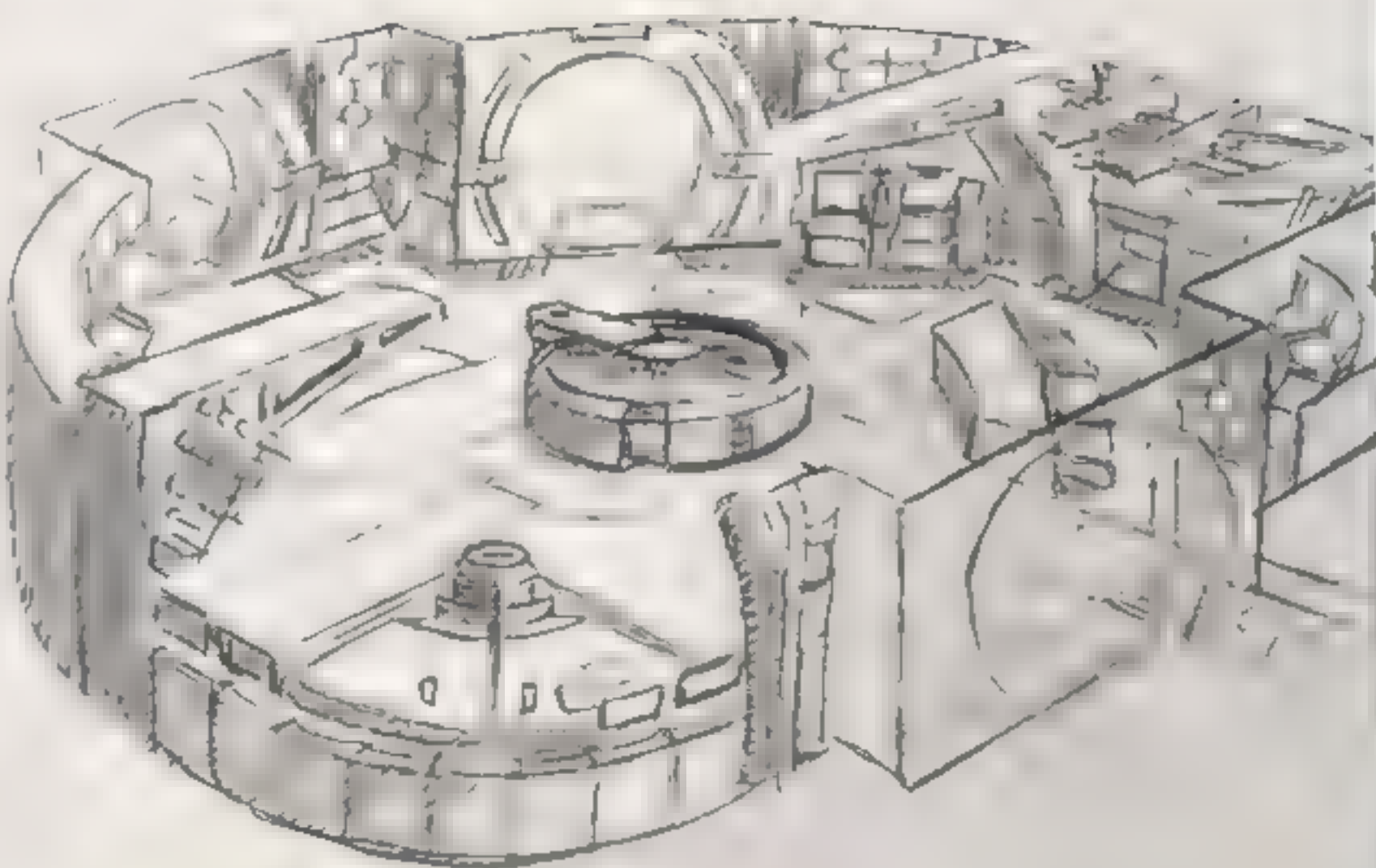
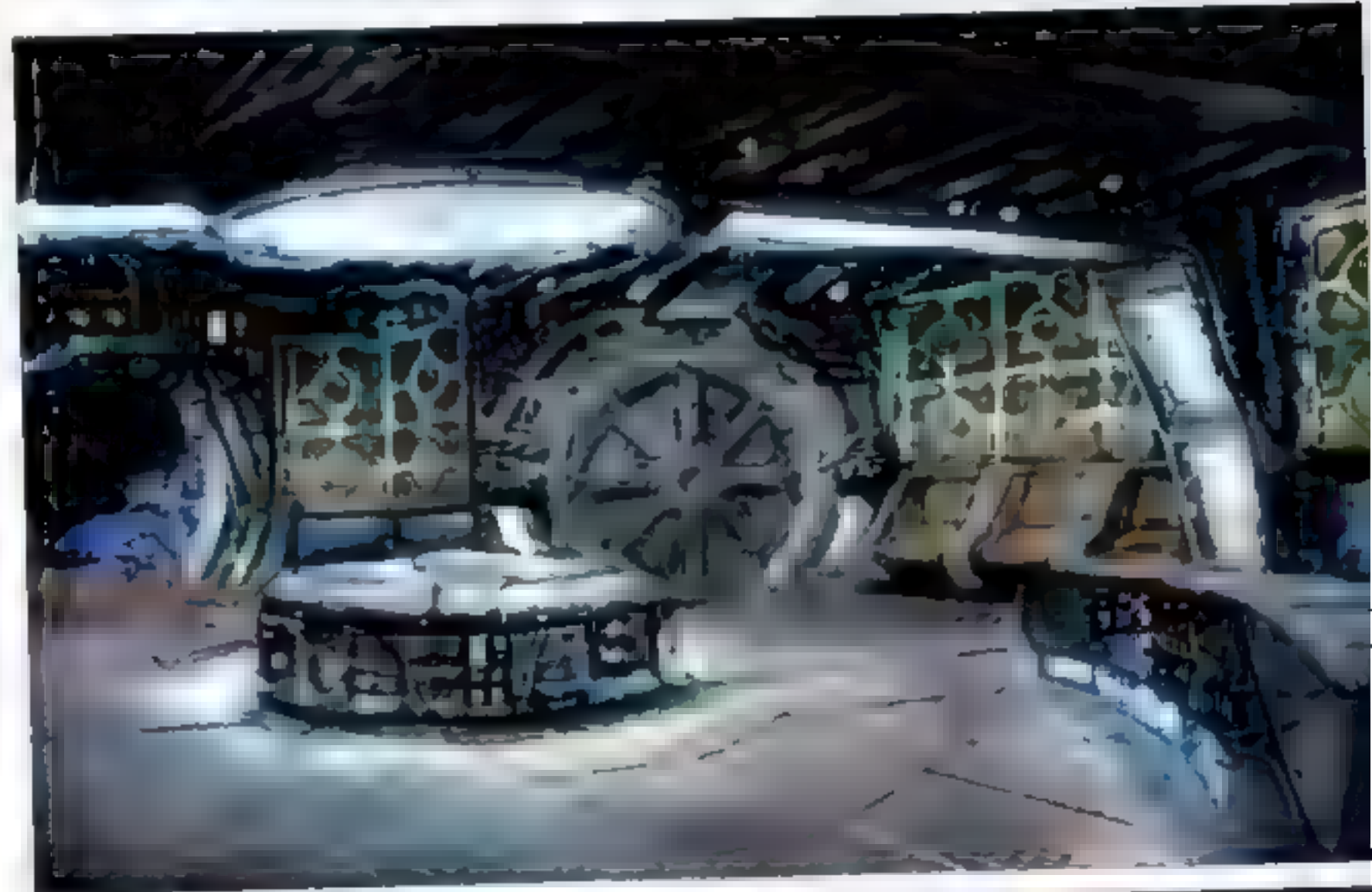
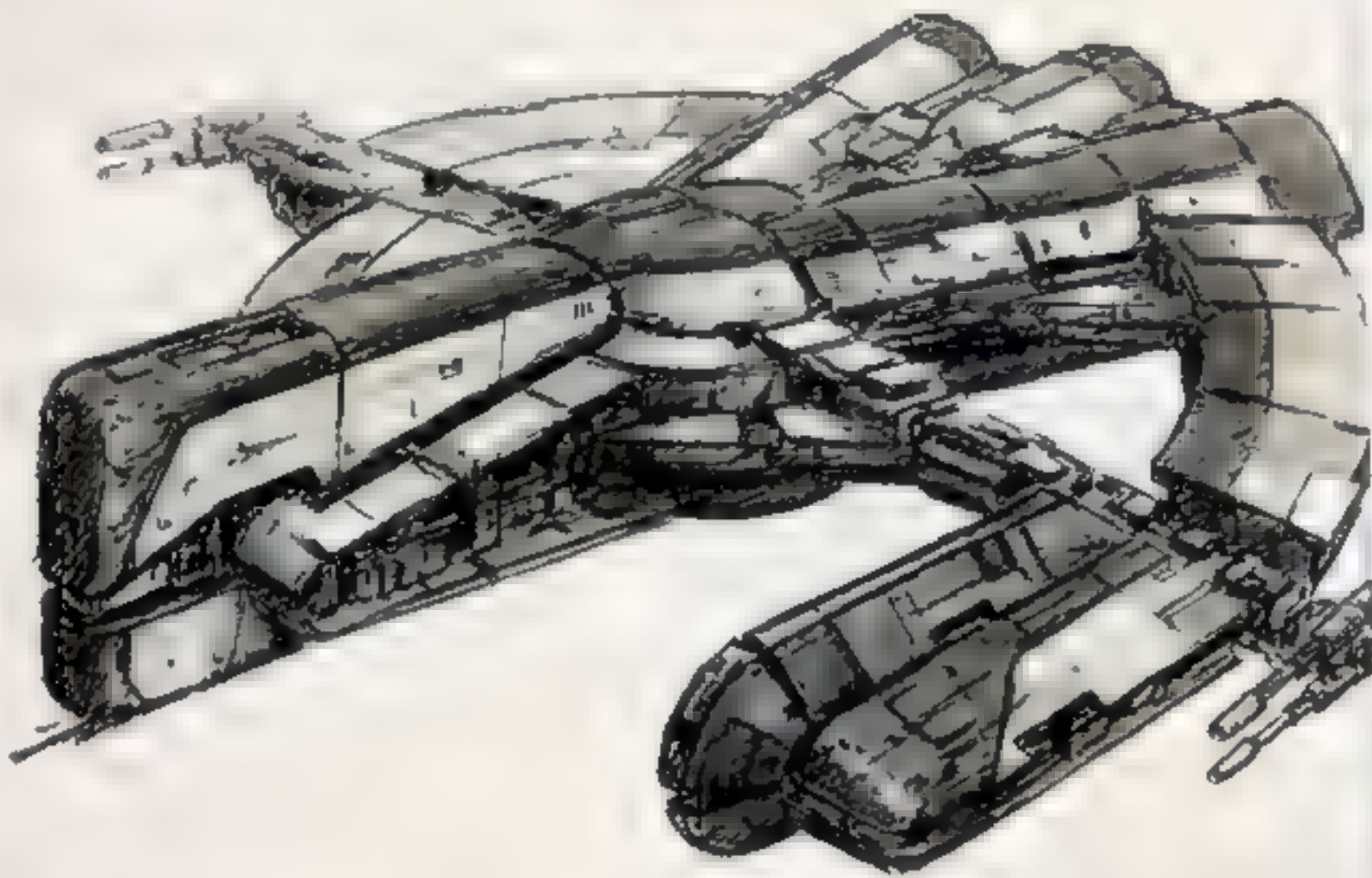
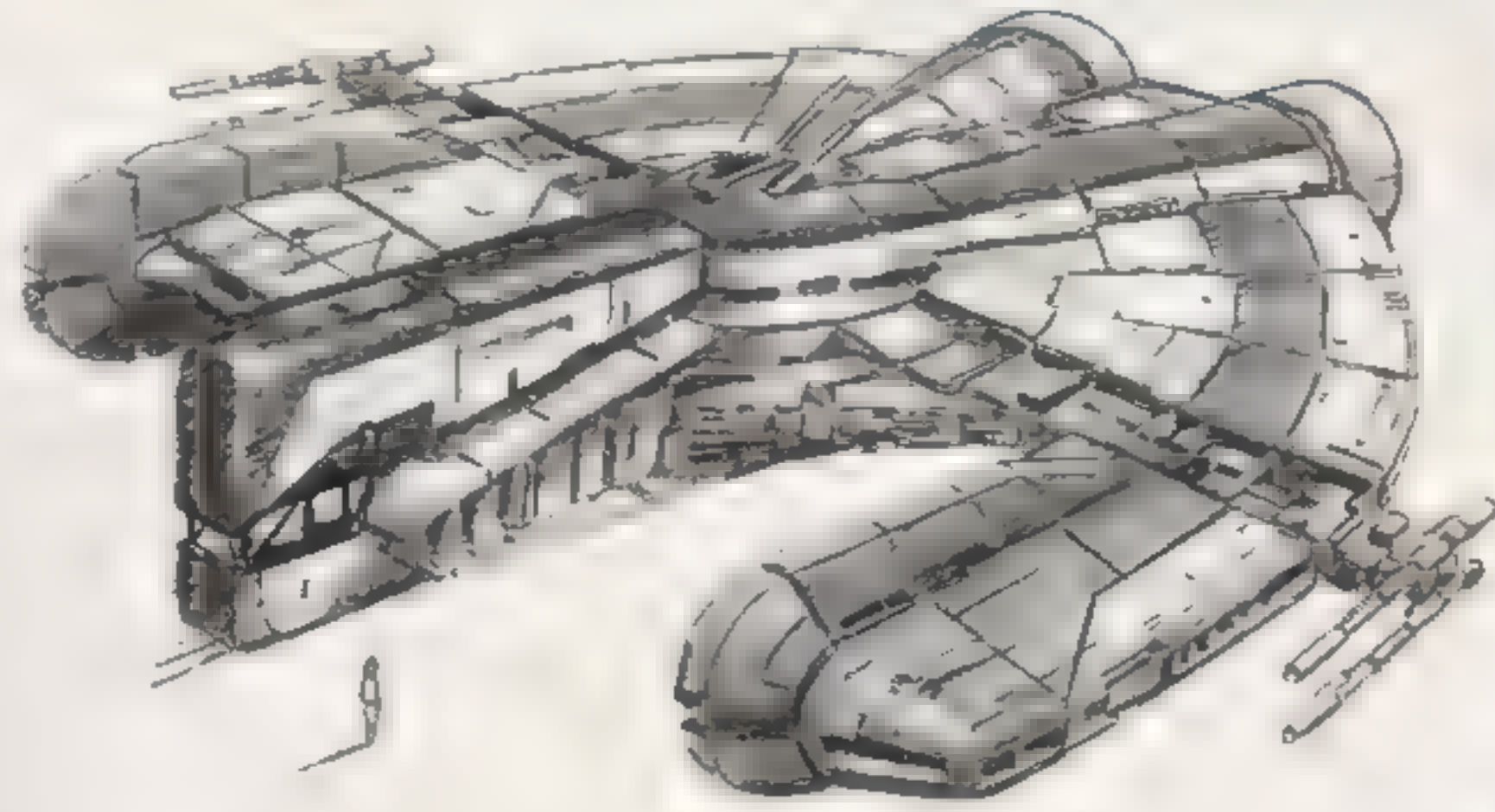
### Planet Overview

The desert planet was originally thought to be rich in mineral resources, and the Czerka corp set up a mining facility on the surface. However, the mine soon ran dry, and now the Czerka corp is trying to recoup their expenses by promoting Tatooine as a hunting and game reserve. The small settlement of Anchorhead has built up around the Czerka mining facility, and the Czerka corp is an ongoing battle to destroy the indigenous sand people who resent the newcomers to Tatooine. They still have a few sand crawlers that mine the last few remaining resources.

### Main Plot Summary

The Star Map can be located in the deserts of Tatooine inside the caverns that now are home to a tribe of sand people. Inside the caverns are the Rakata ruins and an inactive star map. The player must slaughter all of the sand people before he can gain entry to the Rakata ruins. The players can activate the star map through an ancient key that they can find in the caves, or that can be given to them by the imprisoned jawaes (slaves to the sand people). The player can learn a little about Tatooine's past if he talks to the jawaes or if he reads some of the ancient writings that he can find in the caves.





The Ebon Hawk, *Knights of the Old Republic's* signature ship, began its life in sketches before becoming full-color concept art and then being modeled in the game (top right). "The original concept of the Ebon Hawk is multiple layers of tough, transparent paper because we ended up changing the cockpit on it," says art director Derek Watts. "Instead of redrawing the whole thing, we just changed the cockpit, taped it on there, and rescanned it in."





### BIO-TRIVIA

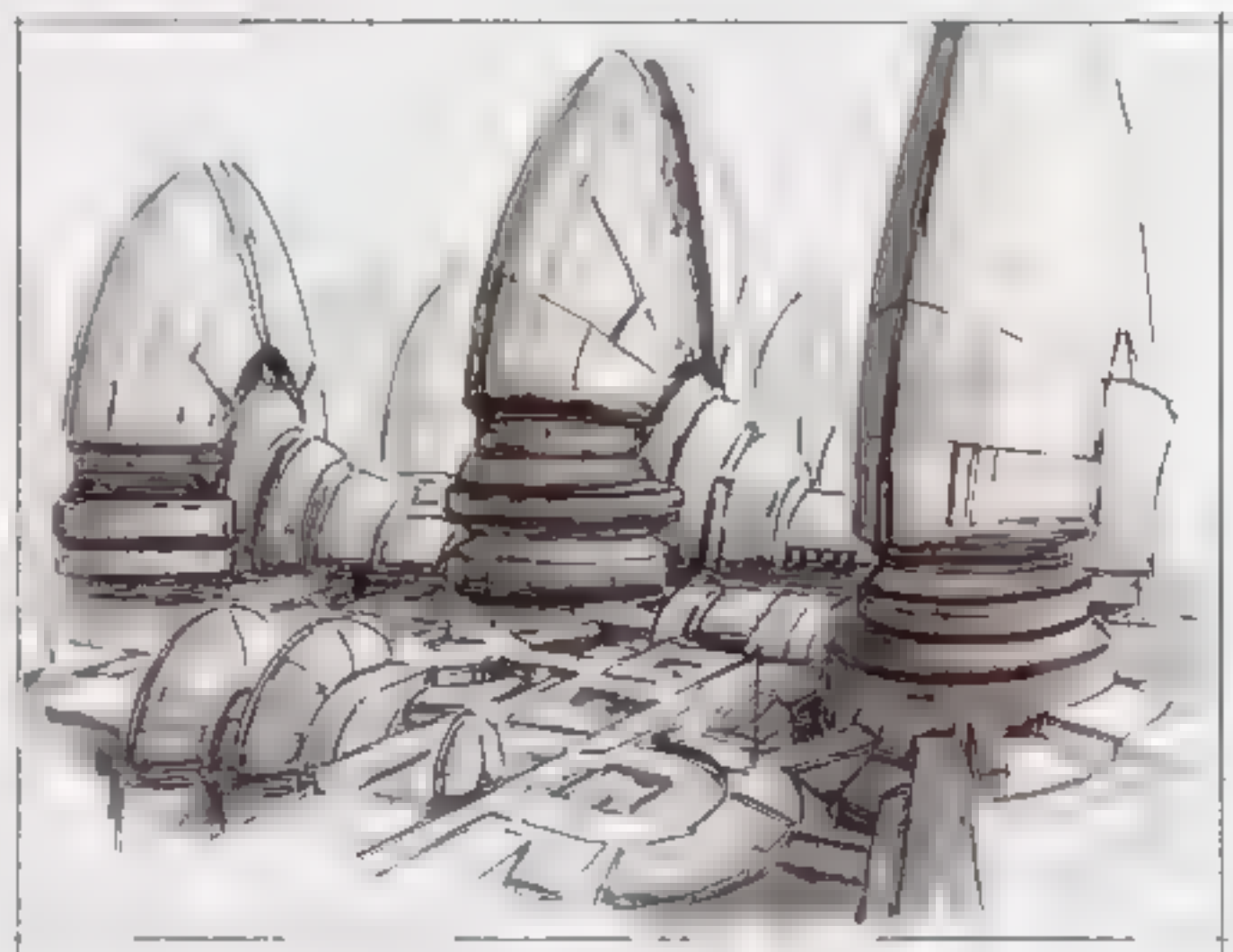
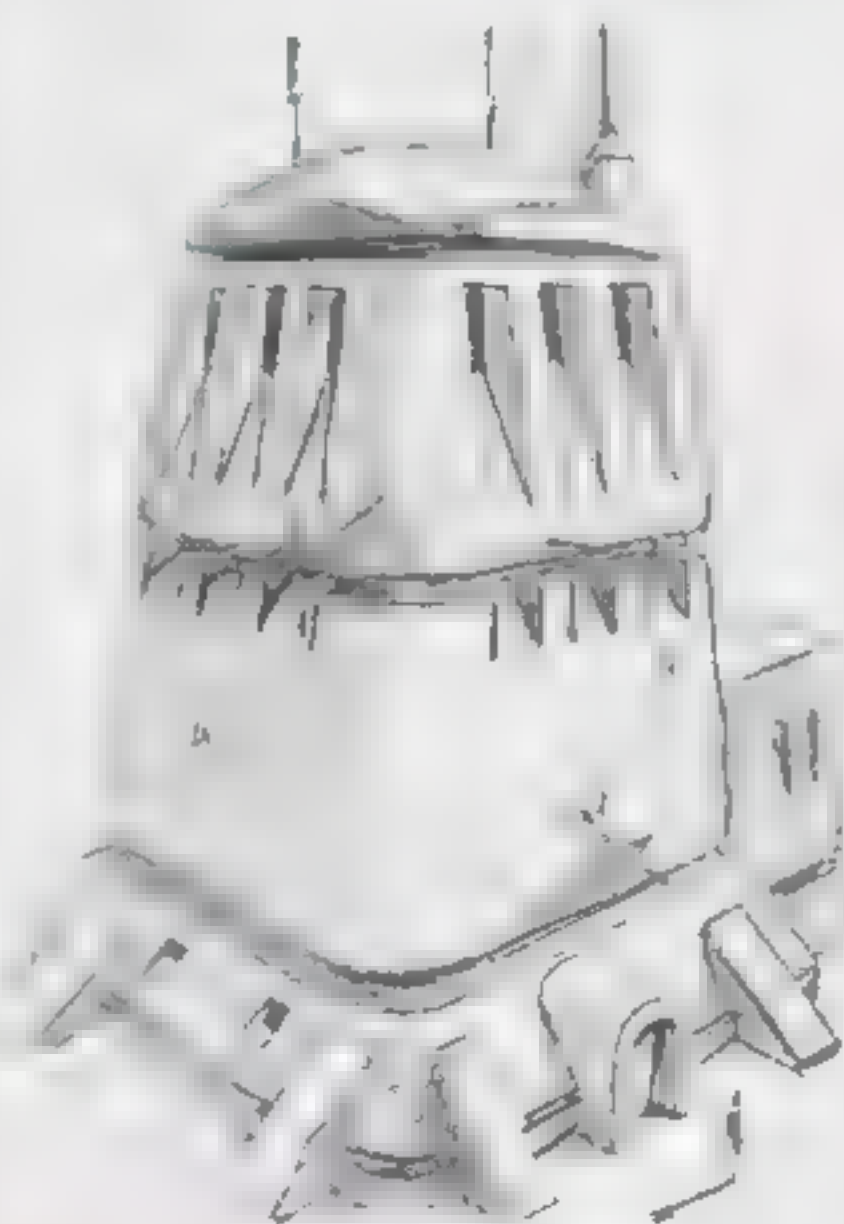
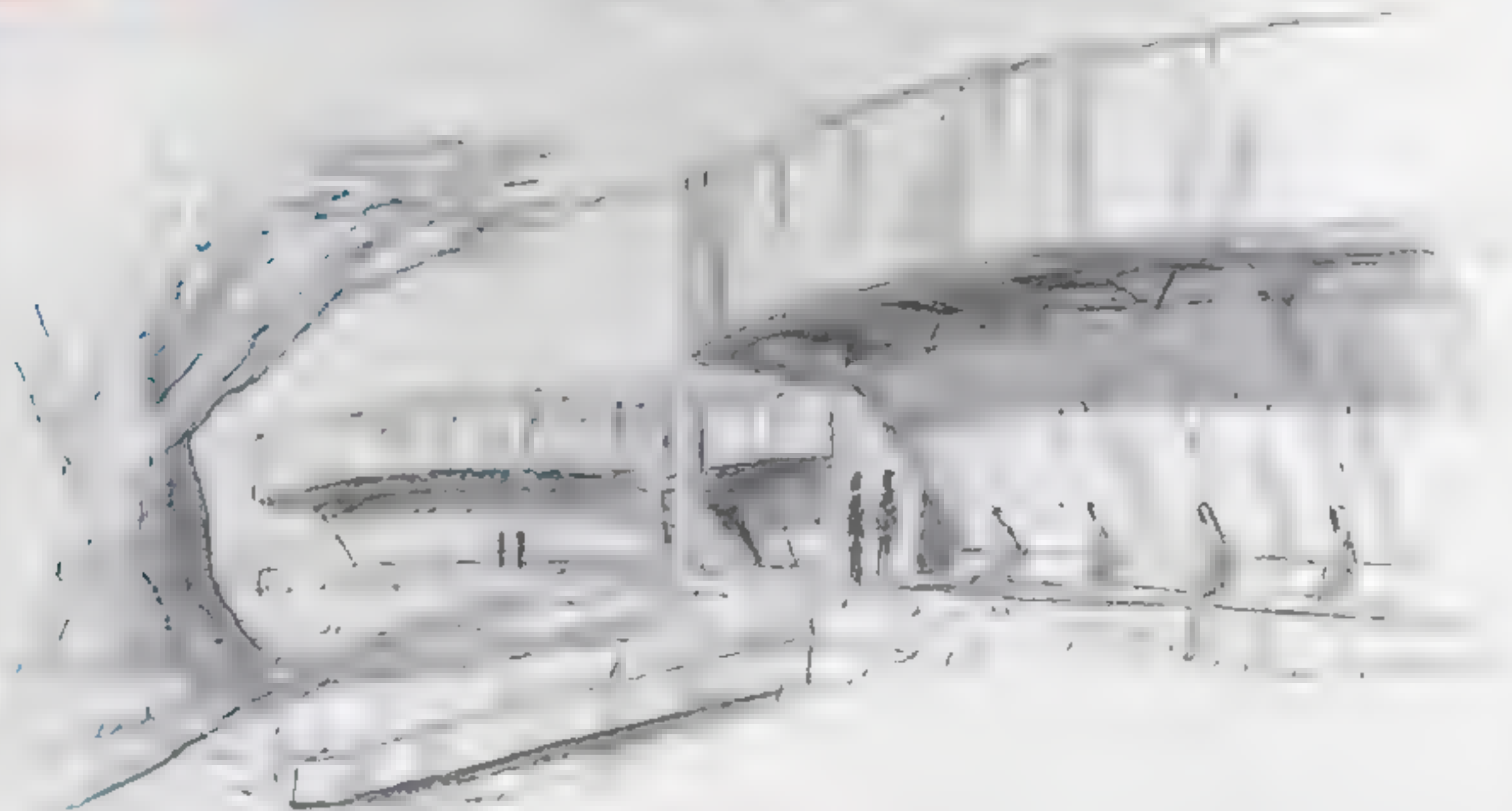
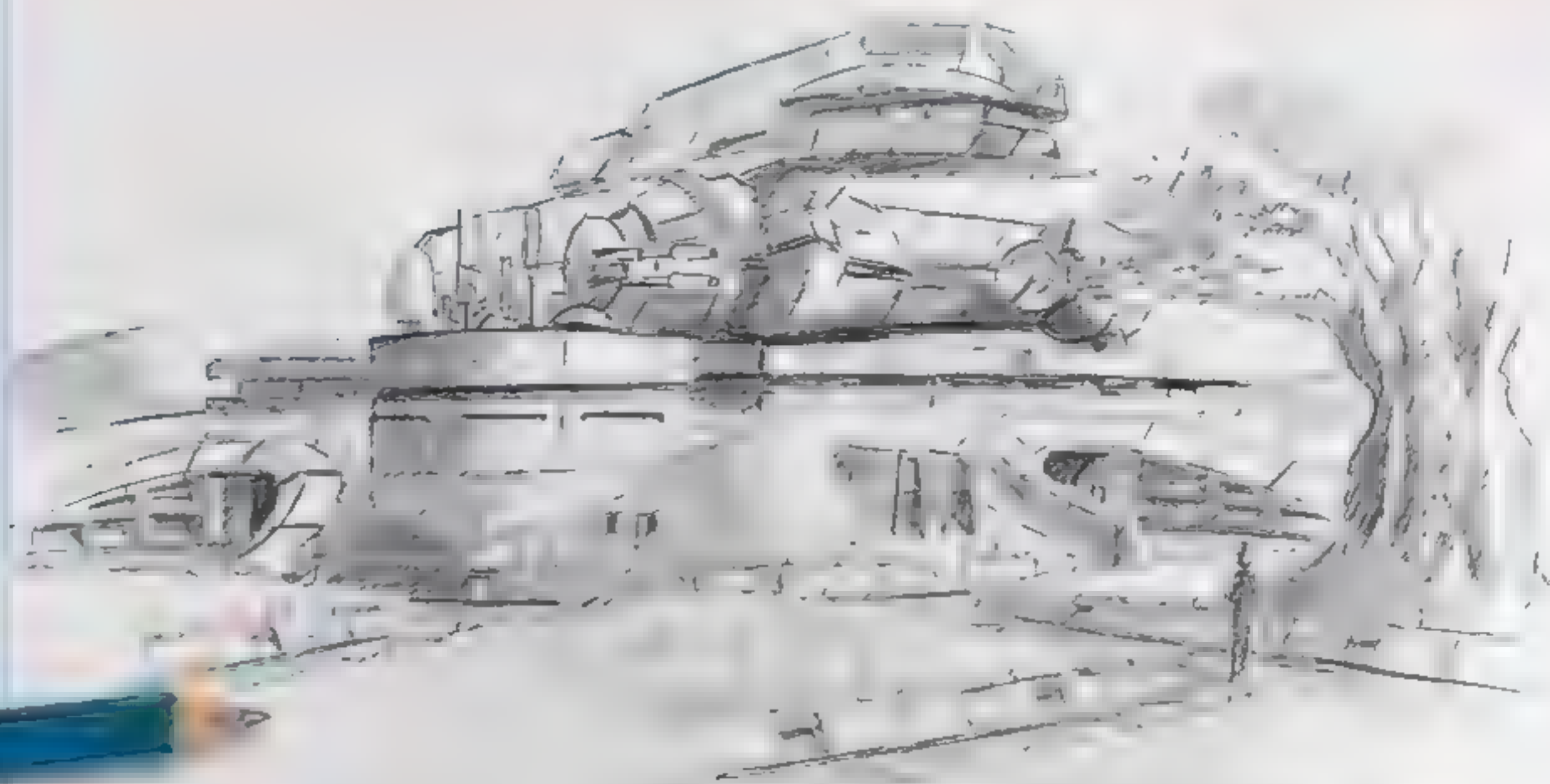
#### KNIGHTS OF THE OLD REPUBLIC WASN'T THE ORIGINAL TITLE

The game title BioWare's development team pitched to LucasArts was *Star Wars: Age of the Jedi*, even going so far as to design a treatment to match the style of the movies, with the gold bar around the words.

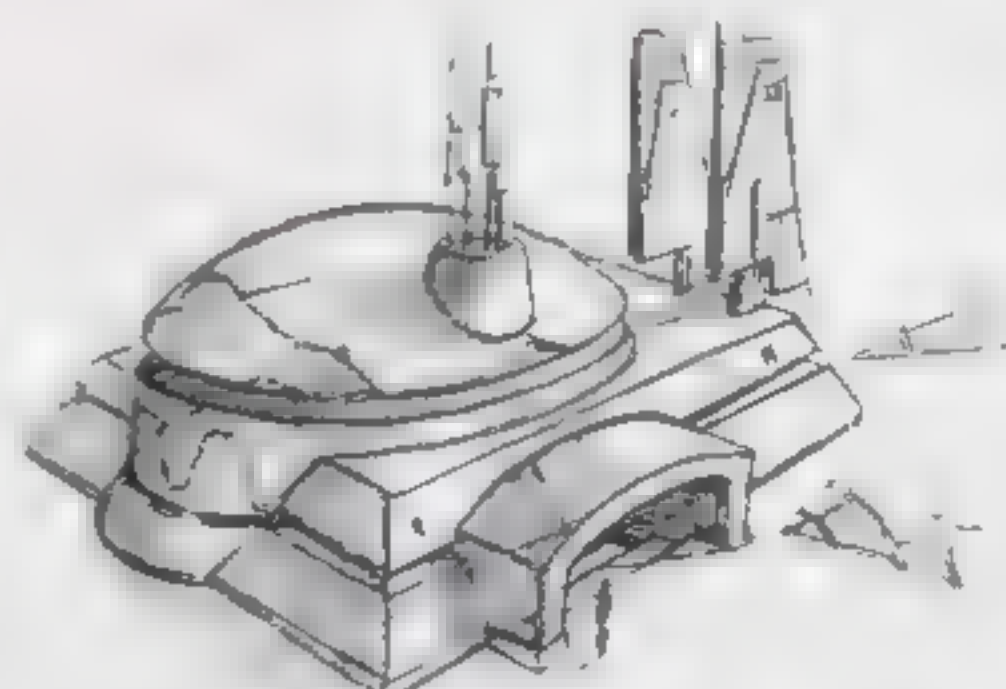
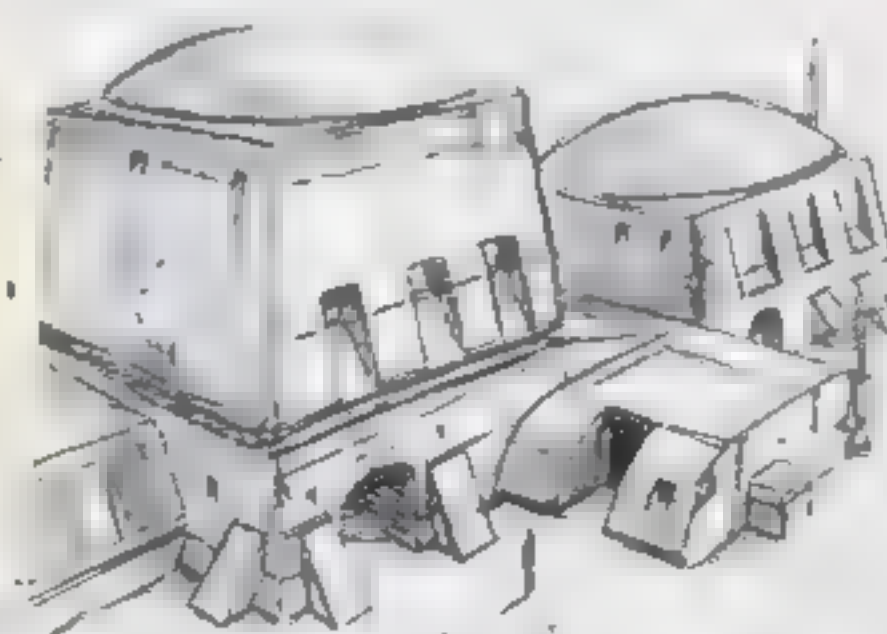
"We really liked that name internally. We thought it was awesome," art director Derek Watts says. "We went to LucasArts. And they said, 'Yeah, that name's not going to work. It's too close to *Return of the Jedi*.' And we were like, 'What? It's not close at all.' Somebody at LucasArts said, 'What about *Knights of the Old Republic*?'"

And that's the name that stuck.

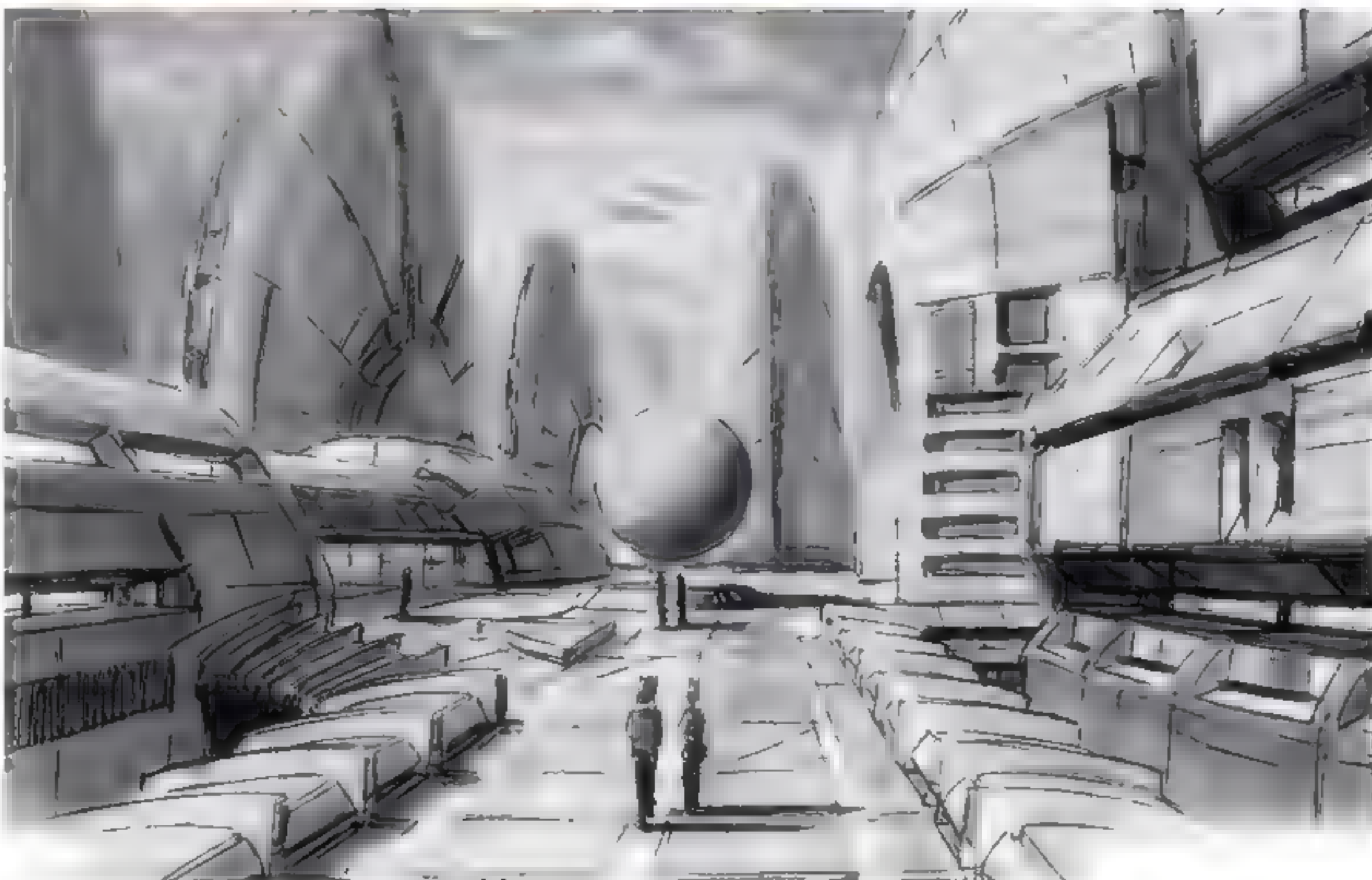
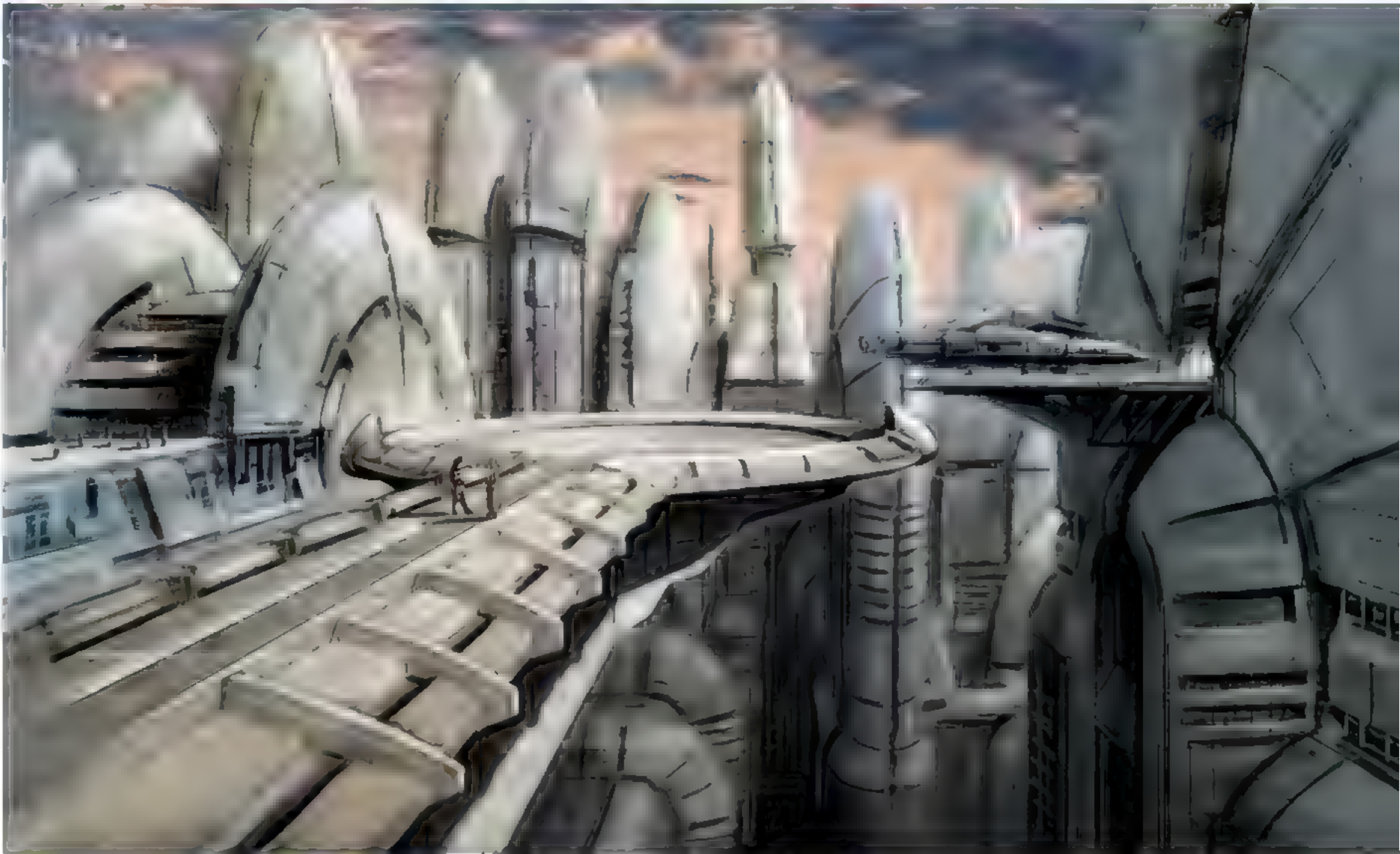
"Now I can't imagine it being called *Age of the Jedi*," Derek says.



AGE OF THE JEDI





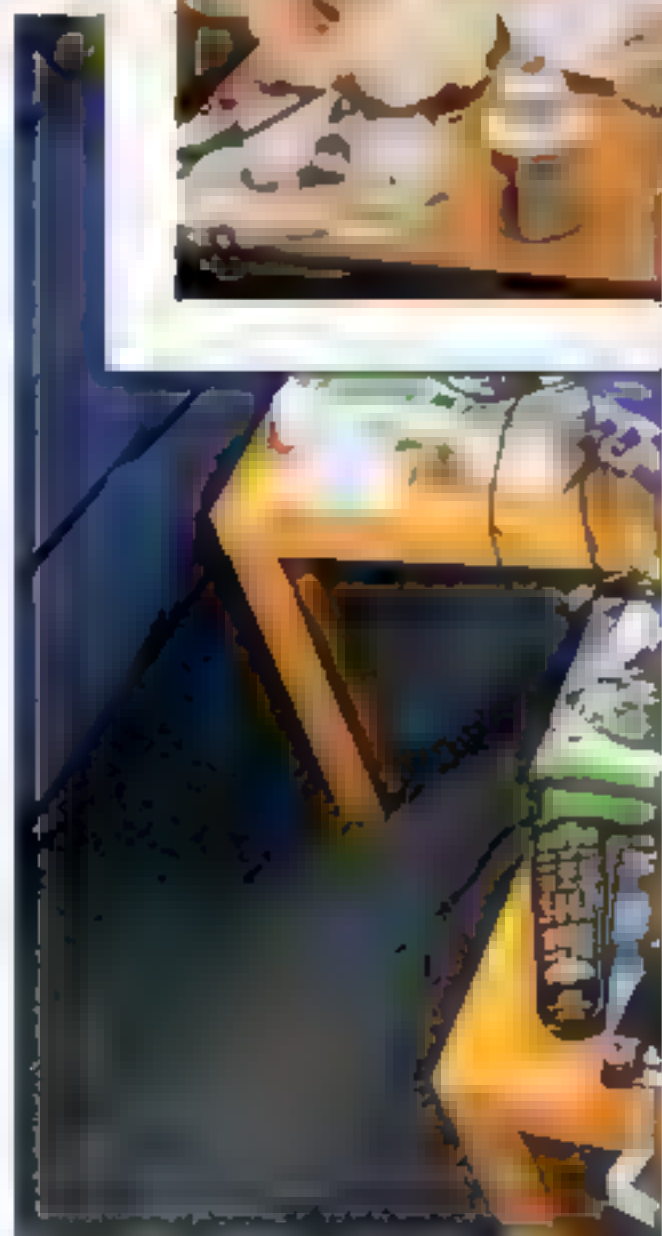
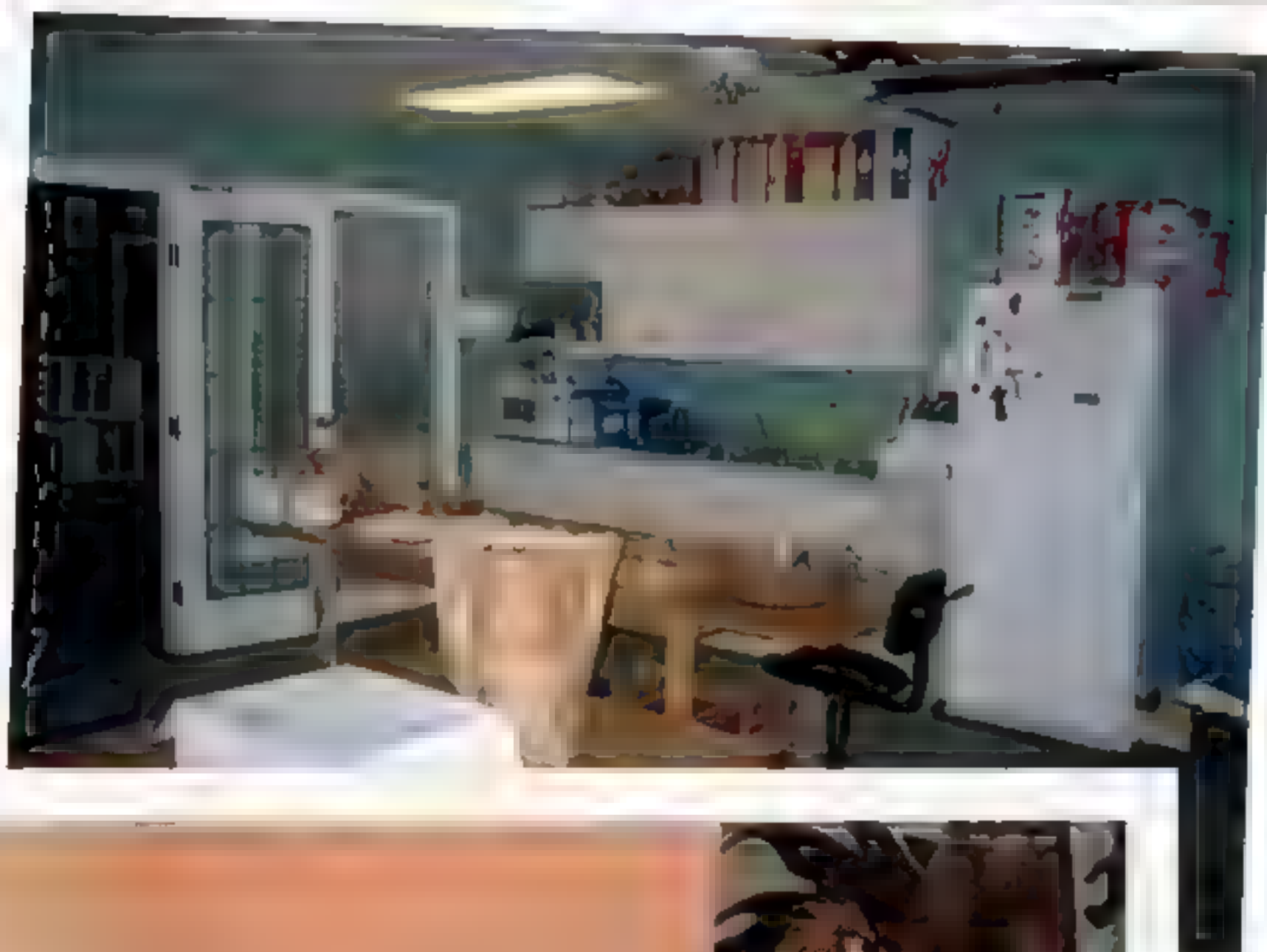


Concept work on *Knights of the Old Republic* began with pencil sketches allowing for quick iteration before adding color to the approved looks. Artists like Tars and Dantooine's perfect the look in *KOTOR*. Emily Williams, trained Academy graduate on Dantooine, top of page, painted the city in a full color version (top of this page). Other sketches in this spread show the evolution of the round, disk-like structures. City is with buildings at Anshon, top of page, bottom of page.



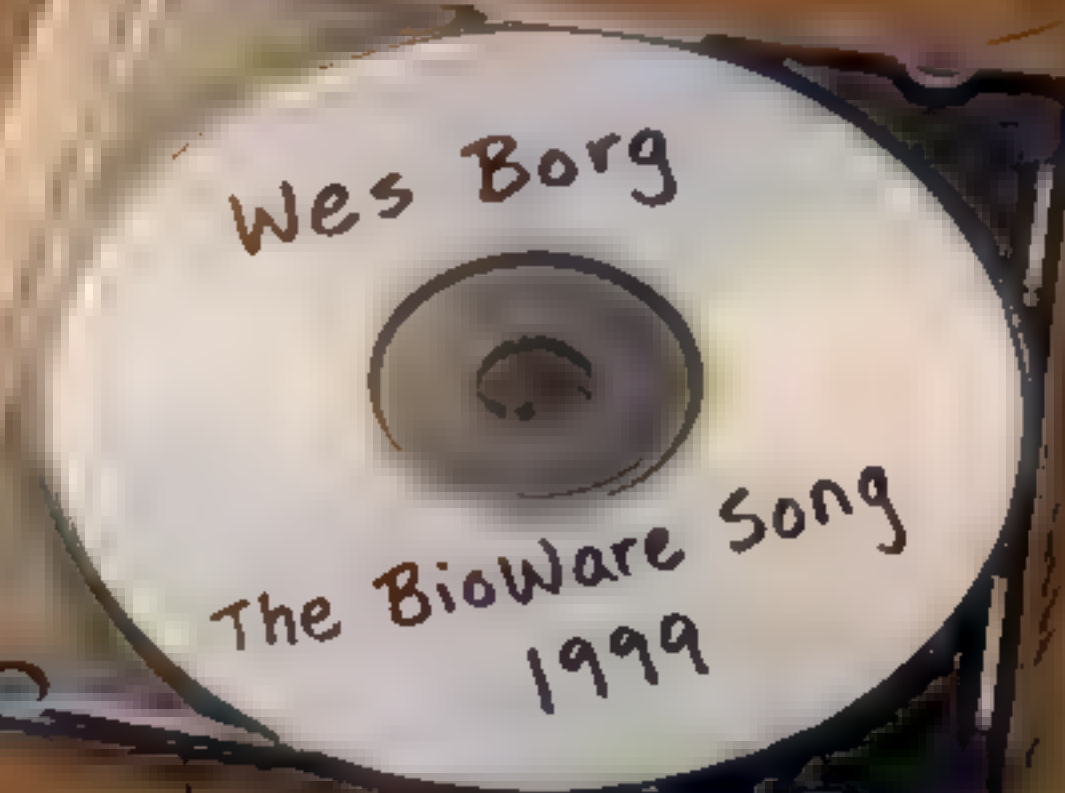
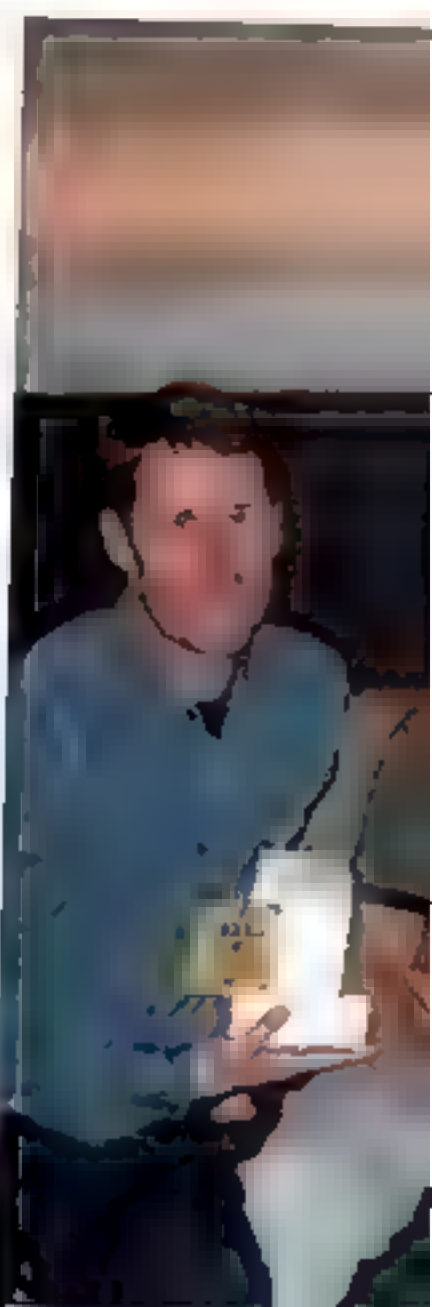
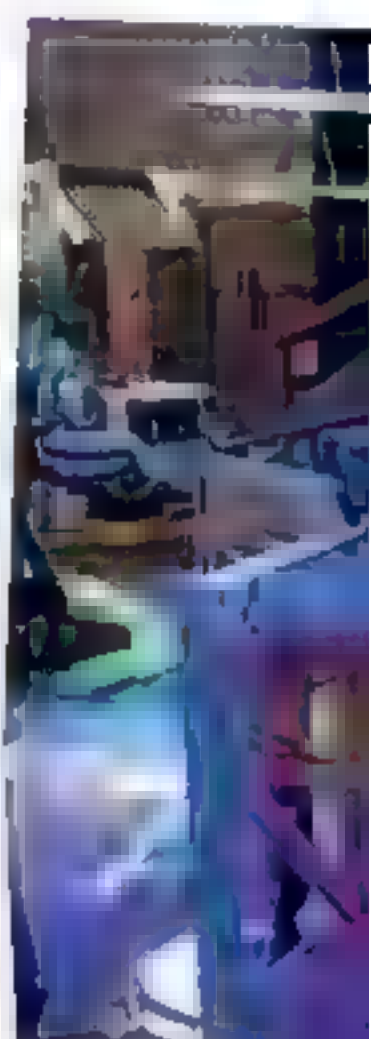
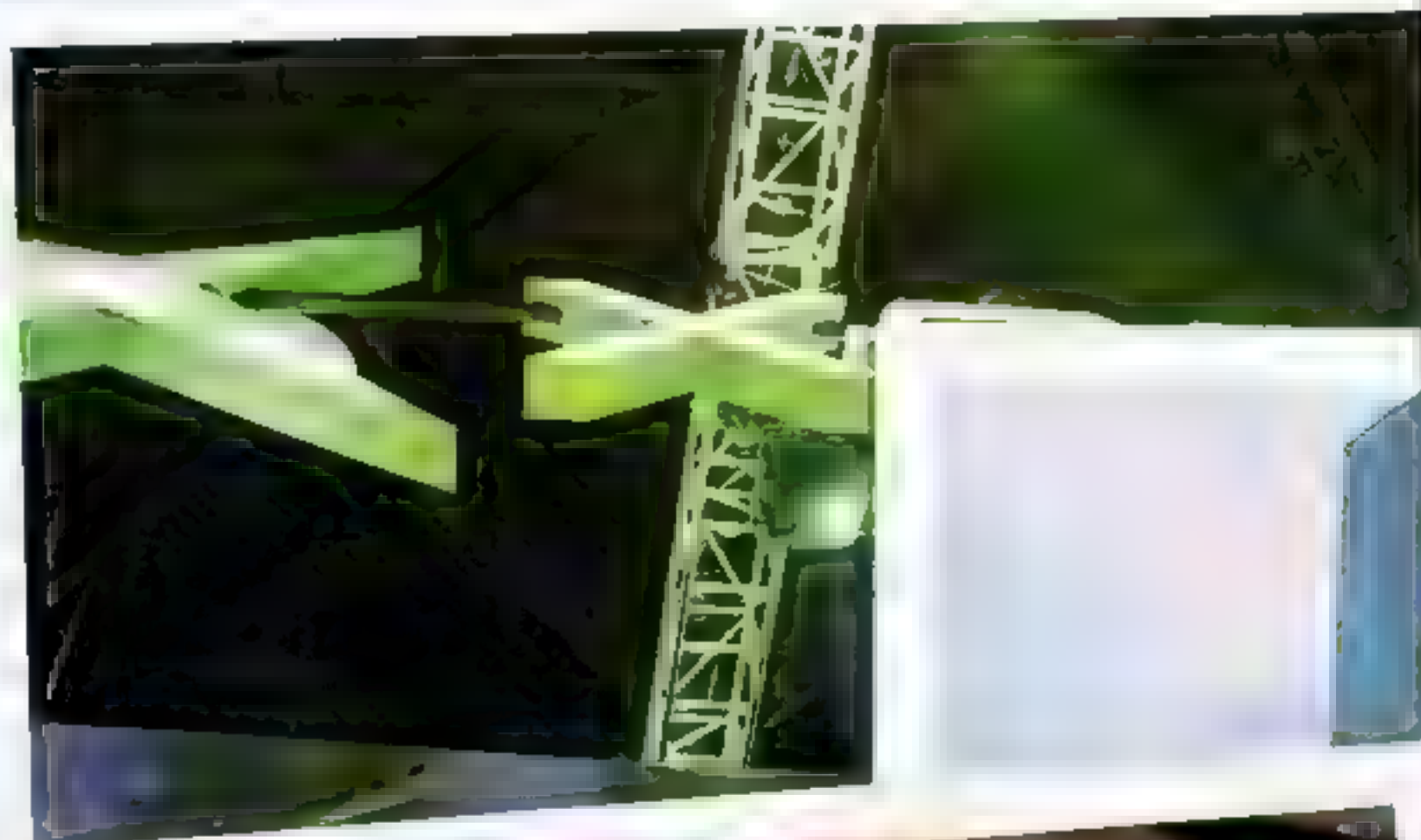






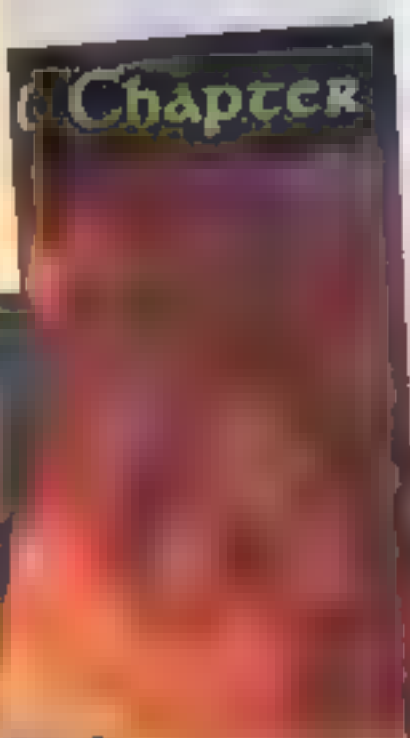
The West Avenue building was a great place to work. It was a small building with a lot of character. The studio grew and the staff grew. It was a great place to work.





Personally, I can't believe your luck,  
You get to work here and make a buck,  
Creating games that do not suck.

—From "The BioWare Song" by  
Edmonton musician and  
Three Dead Trolls in a  
Baggie alumnus Wes Borg,  
commissioned for a  
holiday party







Star Wars: Knights of the Old Republic debuted at E3 in 2001 with a hands-off demo behind closed doors. A year later, the game was on full display at Microsoft's Xbox booth on the show floor.



Knights of the Old Republic received incredible fanfare in the lead-up to its release and well beyond, building anticipation at its E3 appearances and collecting awards like IVP's Game of the year and Roleplaying Game of the Year after launch.



## THE MAKING OF



### BIOWARE GOES WUXIA



#### KEY FACTS JADE EMPIRE

**RELEASE DATE:**

April 12, 2005

**GENRE:**

Action RPG

**PLATFORMS:**

Xbox, Windows, Mac OS

Developed in Edmonton

Published by Microsoft

Game Studios (Xbox),

2K Games (Windows),

TransGaming (Mac OS)

BIOWARE'S SECOND GAME FOR THE XBOX was *Jade Empire*, a wuxia-inspired action RPG set in an eponymous fictional kingdom defined by dynasties that last centuries, rival families, martial arts imbued with magical energies, and plenty of spirits and demons.

It was a bit of a left turn for BioWare, which had largely focused on science fiction and western fantasy genres for their games up to that point.

As BioWare's first original intellectual property in nearly ten years, *Jade Empire* offered an opportunity for the studio to try something new, not only for the team but also in the western RPG space.

BioWare was no stranger to this scale of ambition. Each game they'd made to date was born of a desire to do more, better, and in a new way.

"*Jade* was just so ambitious, to take some of the lessons learned from making a 3D RPG on a console [*Knights of the Old Republic*] and build them into a new IP," says Aaryn Flynn, who worked as a programmer on the game implementing its combat.

The development team, which included lead designer Kevin Martens, lead animator Deo Perez, and lead writers Mike Laidlaw and Luke Kristjanson, pushed BioWare's already innovative narrative techniques and digital acting forward, using a more complex camera system, detailed motion capture, and film-quality voice acting.

"Our mission was to have games that weren't like other video games," says Shauna Perry, who worked as an audio producer on the game, hiring some big-league talent including Monty Python alumnus John Cleese and Edmonton-raised improviser Nathan Fillion.

It wasn't lost on the development team that they were mostly white Canadians in Edmonton, Alberta, making a game rooted in Chinese tradition. The team were huge fans of the source material and approached it with the utmost care. Still, there were some things BioWare could have done better in hindsight, like prioritizing the casting of actors who better represented the backgrounds and identities of their characters.

Making a martial arts game had long been in the DNA of the studio, as far back as Greg Zeschuk's pitch for an isometric/FMV hybrid called *Five Fingers of Death*.

To prepare for *Jade Empire*, the team watched numerous VHS tapes of classic martial arts films (and the occasional bootleg CD) as research.

"*Crouching Tiger, Hidden Dragon* was the film that I think cemented the idea for us and gave us the confidence to do it," Aaryn says of the globally successful wuxia epic.

#### JOHN WICK'S DIRECTOR

##### WORKED ON MOTION CAPTURE

BioWare saw *Jade Empire*, with its emphasis on multiple styles of martial arts, as an opportunity to stretch the motion capture tech of the time to its limits.

They specifically sought out actors who could pull off multiple fighting stances and styles, hiring the Smashcut Action Team—helmed by stunt coordinator Chad Stahelski, who went on to direct the *John Wick* film series.

"For *Jade Empire*, we did ten days straight," a significantly long session for combat motion capture at the time, studio director of animation Steve Gilmour says.

A lot of the work was simply relying on the expertise of the stunt performers, Steve says.

"We would say, 'We want sword swipes—show us something cool.'"

#### A TRANSFORMER BLEW RIGHT

##### BEFORE JADE EMPIRE WAS FINISHED

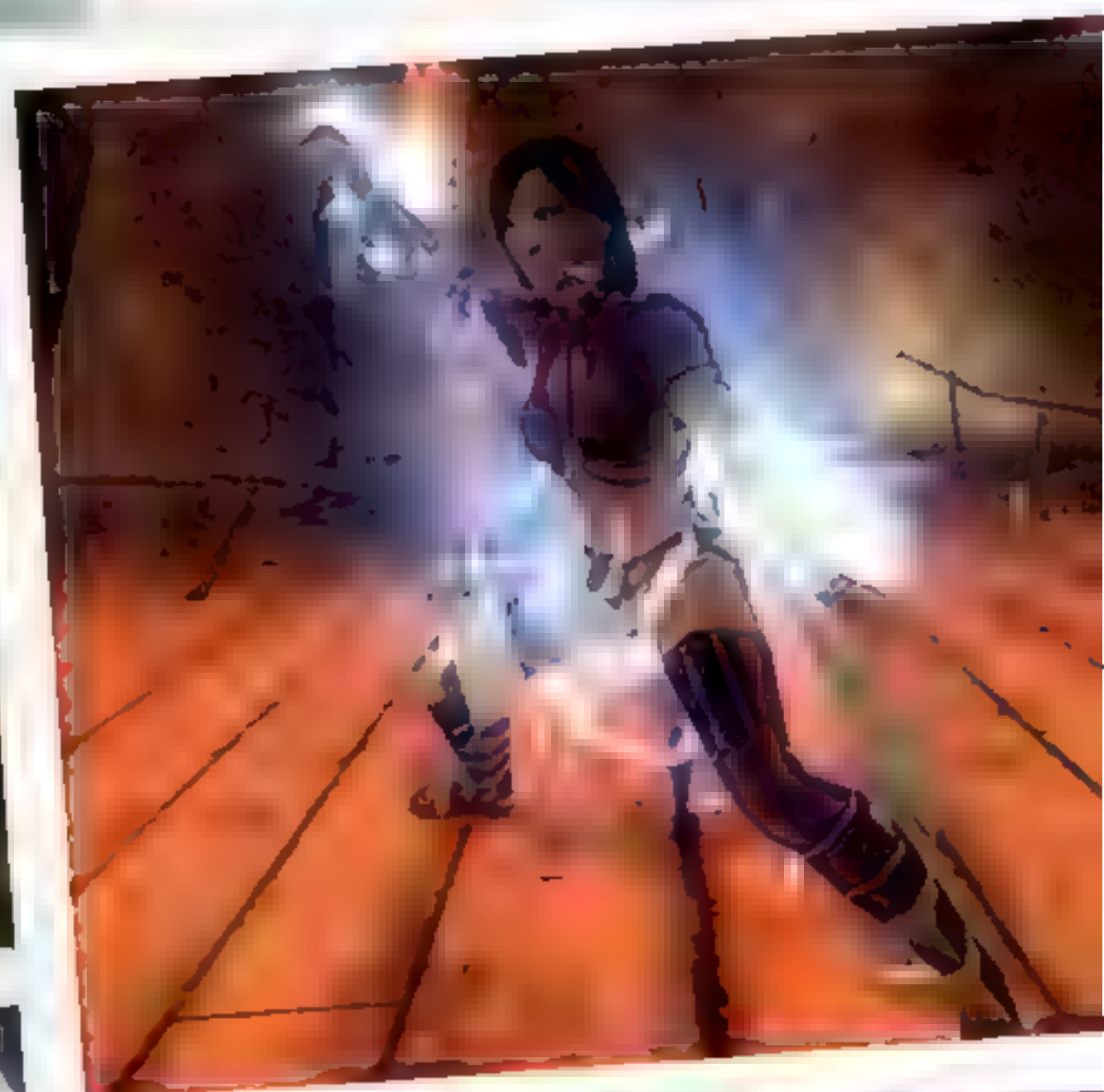
BioWare was in the middle of finishing *Jade Empire* in July 2004 when a massive storm brought six inches of rain down on Edmonton in an hour, blowing out power the Terrace Office Tower studio.

It would take a week to restore power, a week the team didn't have. This happened on the weekend, during what is often the most stressful time in the development of a video game: a period





Wuxia (a noun pronounced "wu-sha" that roughly translates as "martial heroes" or "martial arts") is a genre that mashes up ancient Chinese history, class structures, and martial arts traditions with fantastical elements like magic, fictional warriors, and creatures.



called finaling, when a core team scrambles to fix any last-minute issues and, god forbid, game-breaking bugs.

"The transformer exploded in the parking lot," Mark Darrah says. "Everyone else got a week off. I did not get a week off."

Instead the core *Jade* team hauled their PCs into the neighboring Delta Hotel to set up a temporary office and finish the game on time. They set up their stations on foldout tables in a top-floor hall with high ceilings called the Starlight Ballroom, a space normally reserved for parties and wedding receptions.

"It was completely surrounded by windows," *Jade Empire*'s lead graphics programmer Patrick Chan says. "It was a pretty nice office space, actually."

Patrick was on call the weekend the transformer blew. His pager went off and he dashed over to the studio to find IS already hauling computers over to the Delta.

He says the team had already been on a tight timeline. *Jade Empire* was an early Xbox title, and they wanted to make sure it launched on time. Hence the pager system.

"If we needed to get something fixed to pass cert, they'd call you in," Patrick says. "The cert process needed quick turnarounds to try to get through as fast as possible."

After the core team set the machines up in the ballroom, work on the game continued. Mark thinks the disruption actually helped the team focus.

"The reason why I think it was actually really good is because it was incredibly isolating," Mark says. "Everyone else can go do whatever the hell they're going to do, and these twelve people are going to ship the game. I think that isolation allowed us to focus to a degree that we've never emulated. I've actually brought it up in games since *Jade Empire*: maybe we should look for an artificial way to simulate this experience."

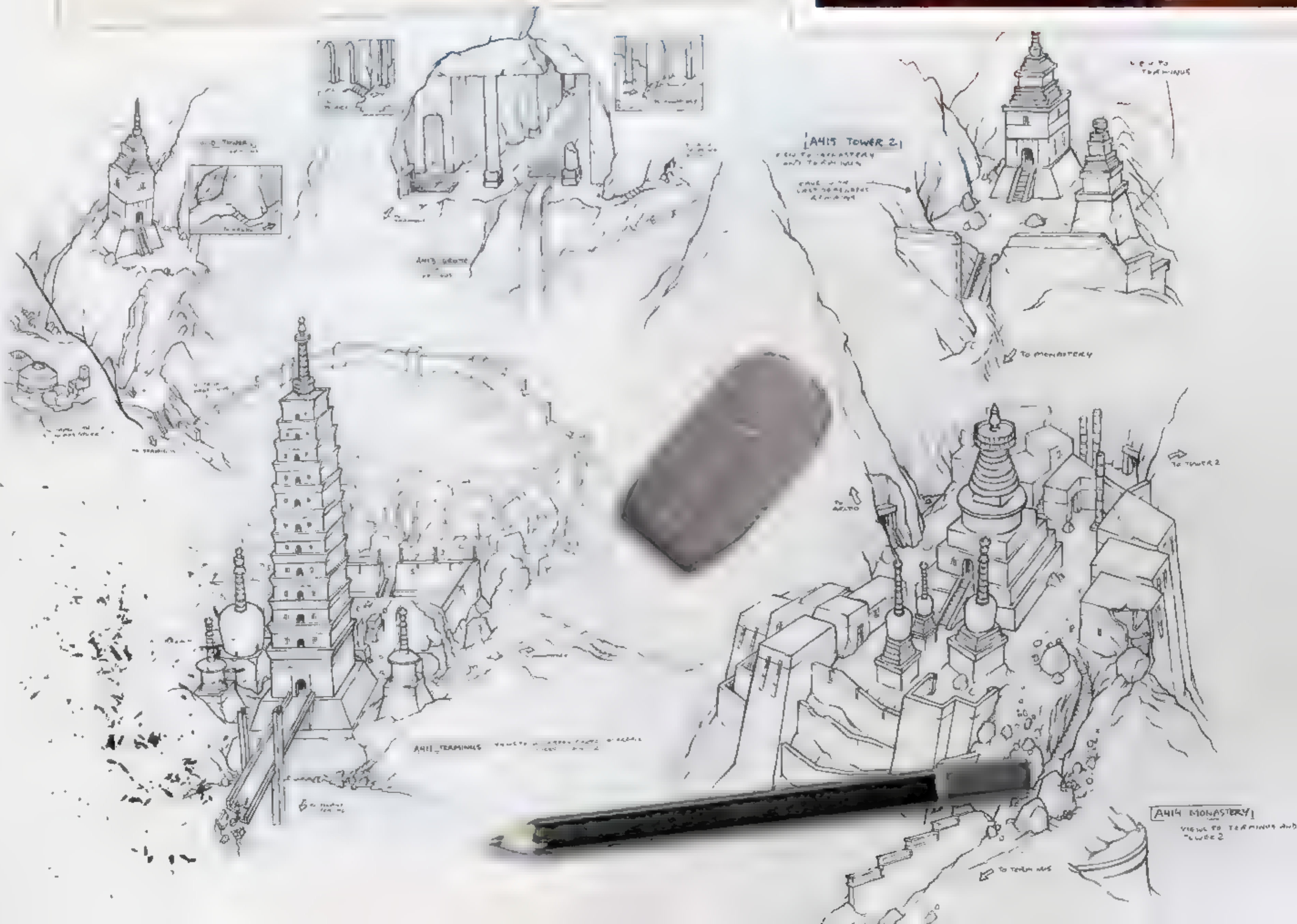
That hasn't happened. Yet. But *Jade Empire* did, shipping on time as BioWare's first game based on original intellectual property since *Shattered Steel*.















### BIO-TRIVIA

#### BONO OF U2 INVESTED MILLIONS IN BIOWARE, BUT THE DEAL ALMOST WENT UP IN SMOKE

In 2005, private equity firm Elevation Partners—helmed by venture capitalists industry veterans like John Riccitiello and frontman Bono of the band U2—invested substantially in BioWare, along with LA-based studio Pandemic. The two studios formed a strategic partnership that at the time was valued at \$300 million.

According to Elevation's official messaging at the time, the deal created "one of the world's best-funded and largest independent game development houses." BioWare founders Ray Muzyka and Greg Zeschuk were thrilled with the deal, as they saw it as an opportunity to start developing and self-publishing games based on original properties rather than solely focusing on licensed games.

Senior director of business planning and development Richard Iwaniuk remembers the day they announced the deal to the studio, which was buzzing with excitement. At that point, the contract was signed and things were absolutely going ahead. The only thing that could have derailed the deal was something like the studio burning down, which would have led to unrecoverable losses, Richard says.

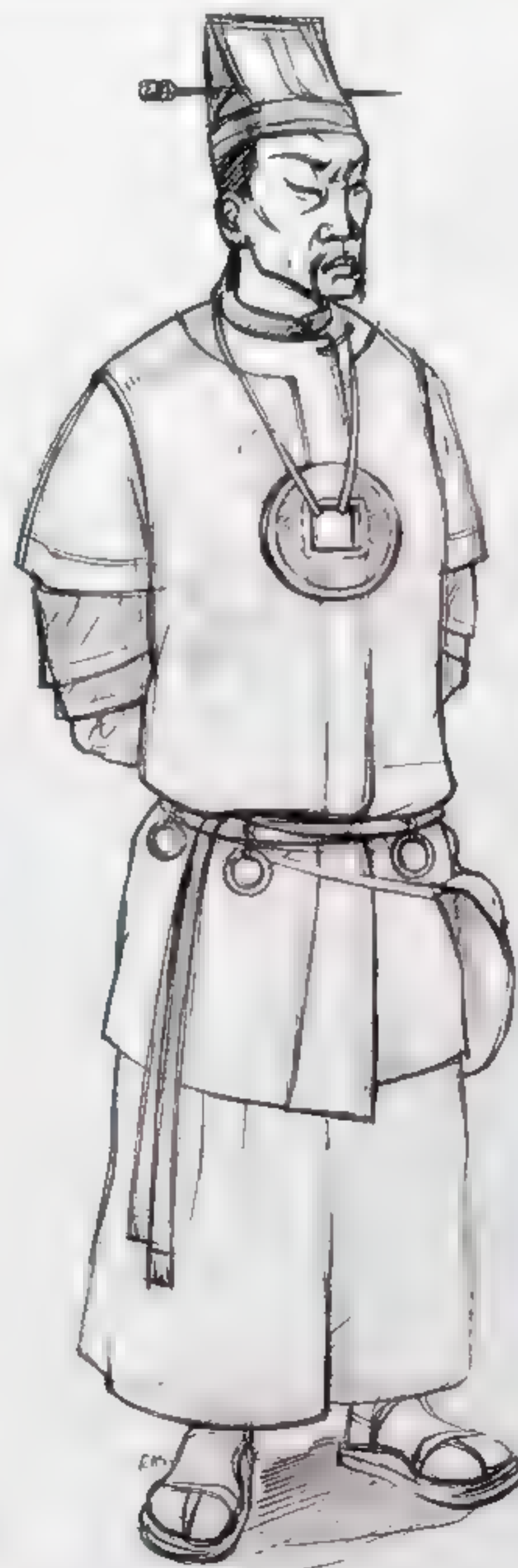
"So we do this company meeting. Everybody's all excited... there's just this buzz and this energy. And Ray and I are walking back to the office and we smell smoke!"

They ran into the office to find Richard's *MDK2* poster had fallen off the wall, landing on top of a halogen lamp. "We literally pulled the *MDK2* poster off and it was fried and burned on the edges, but it actually never went up in flames," Richard says. "We closed the door and we poured ourselves Scotch and drank Scotch because it was like holy fuck, how close were we?"

BioWare-Pandemic was acquired by Electronic Arts in 2007 for around \$860 million, two and a half years after the investment from Elevation Partners. Riccitiello went on to become EA's CEO.







Bioware's concept artwork was shifting to digital drawing programs by the time *Jade Empire* was in development, but artists like then intern Matt Rhodes still liked to work on paper, drawing characters in blue pencil and ink.





## REAL TALES OF DEVELOPMENT: THE LAZY SUSAN FACE SCAN

WITH *JADE EMPIRE*, BioWare sought to expand the scope of its digital acting technology by photographing real-life models in 360 degrees and mapping their likenesses to in-game characters.

BioWare had never done this before, so they reached out to future studio chief operating officer Shauna Perry, whose experience with the company up to that point was limited to planning holiday parties. Shauna worked extensively with Edmonton's theater community, so she knew how to find the right actors and models. But photographing them from every angle?

That was a new one for her:

*I built—I was very proud of myself—a human lazy Susan that was strong enough to put really big people on. The system was built from two IKEA lazy Susans, but they had a crappy plastic spinning mechanism underneath for use at your dining table. I removed that junk, bought a heavy-duty bearing system from Lee Valley that would hold up to one thousand pounds, and mounted it in between the two wood disks. The models had to stay very still as I captured twelve pictures around their bodies, arms out at their sides. I'd spin the models slowly, moving them thirty degrees each time (angles professionally marked on the wood with a Sharpie!), and then take a picture at that angle. I had to bring my own lighting setup and I'd never taken proper pictures in my life. So for the first model, the lighting was terrible, but they got better.*

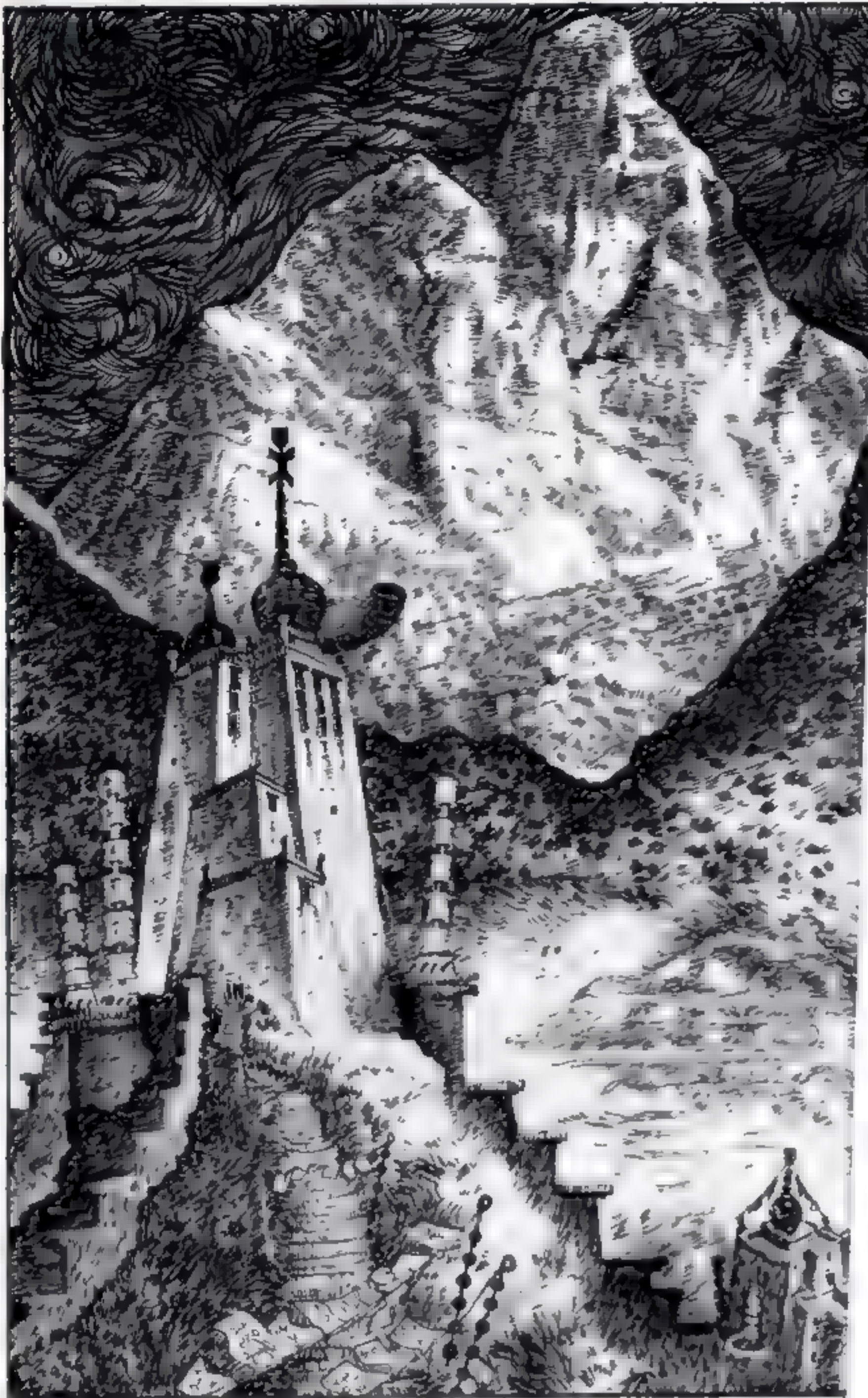


Mountain redoubt of Curved Earth. Guarded by an enormous swirling boulder, only the bravest souls attempt to cross and pass beneath the gaze of the two watchful Griffin towers. LoHS. Warriors - BioWare Corp.





LACE OF THE DEAD

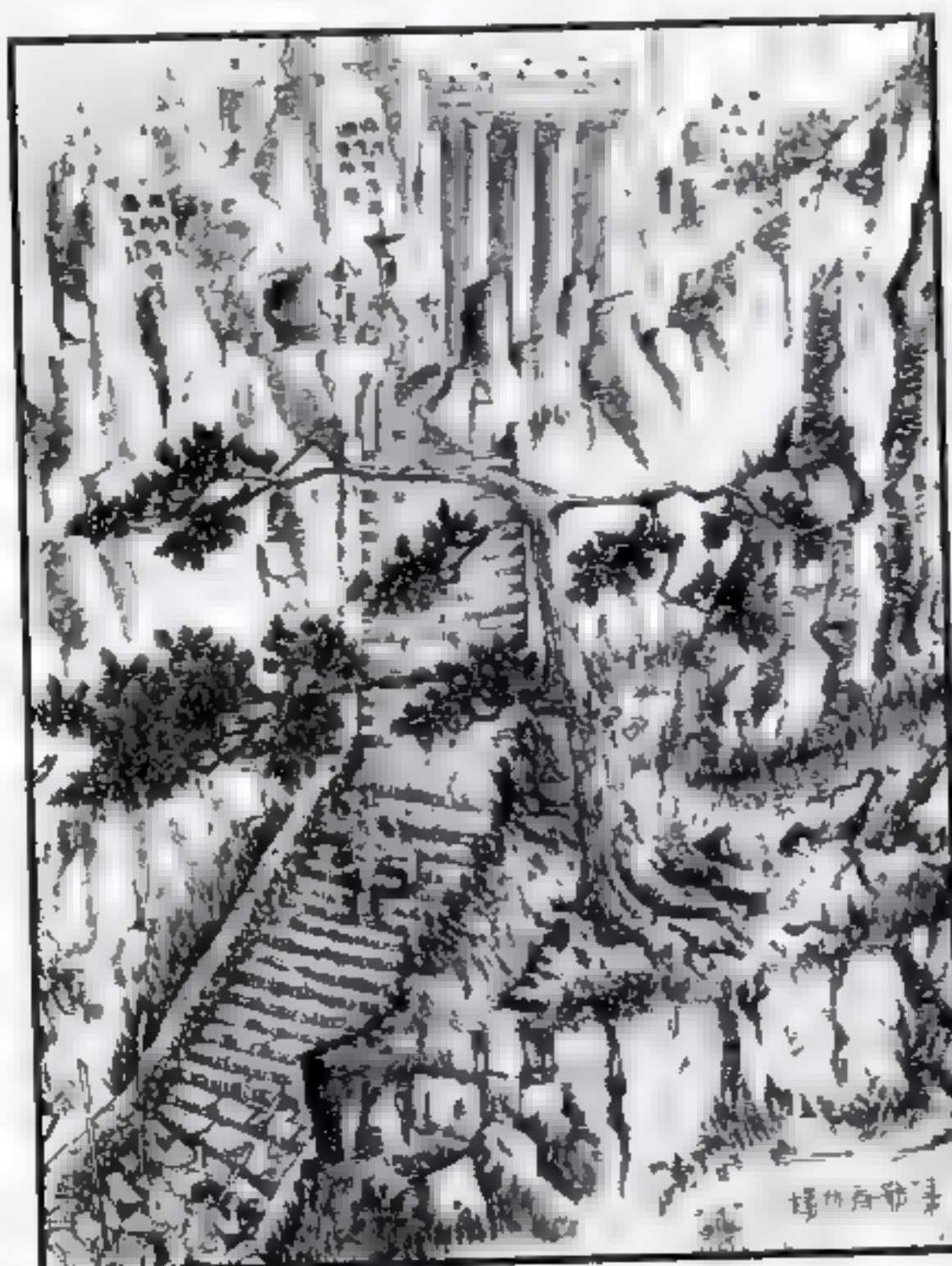


— REMOTE FORTRESS WHERE AN EARTH WING SHOWN. A MOUNTAIN REFLECTED IN ITS WATERS. BENEATH THE SURFACE, A WEIRING FORM. A TENDRIL, PORTAL TO THE UNDERWORLD, THE DRAGON'S PALACE.



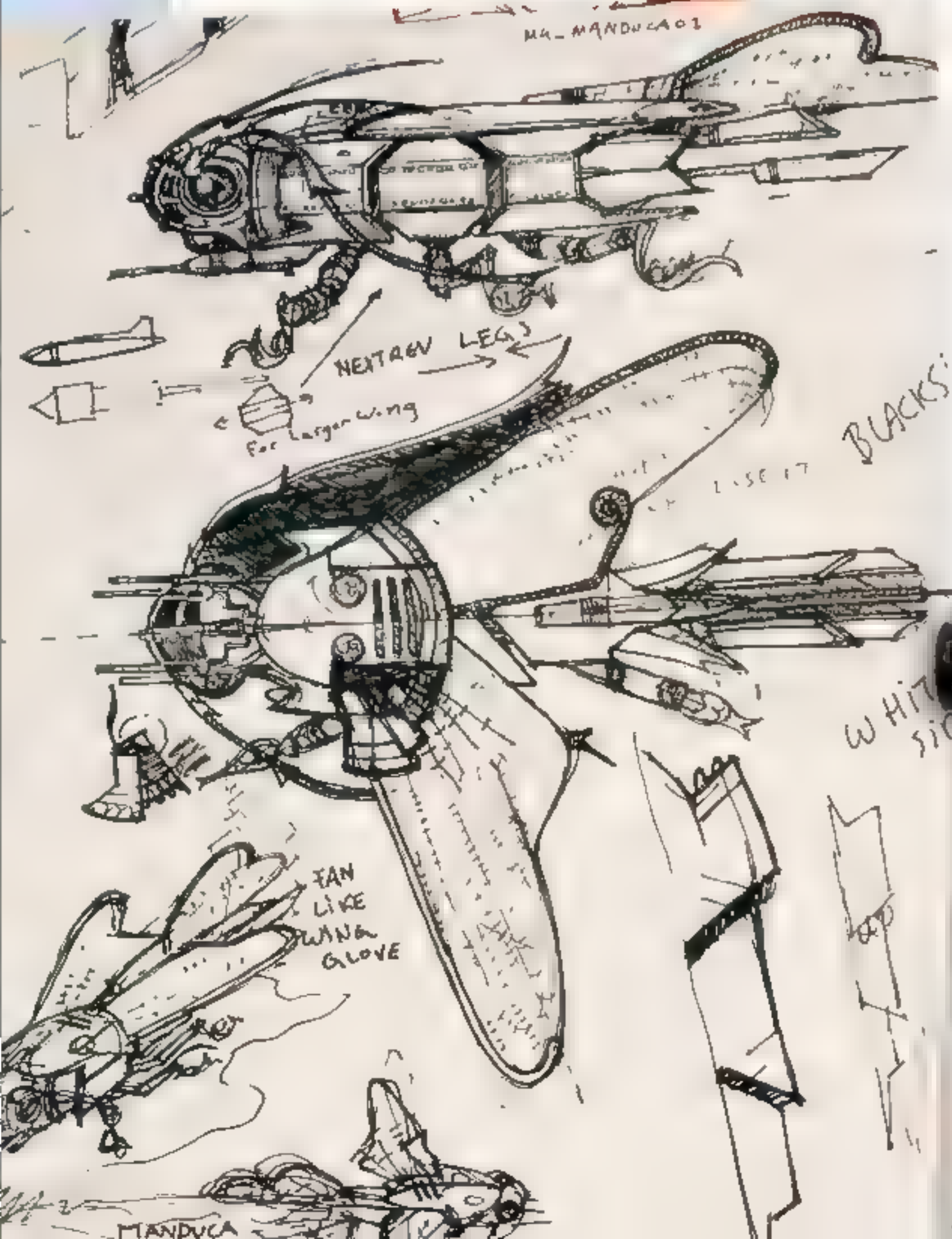
Jade Empire's brand-new setting meant artists were free to explore new styles of conceptual artwork.

Valley of Flying Stones - Land of Howling Spirits



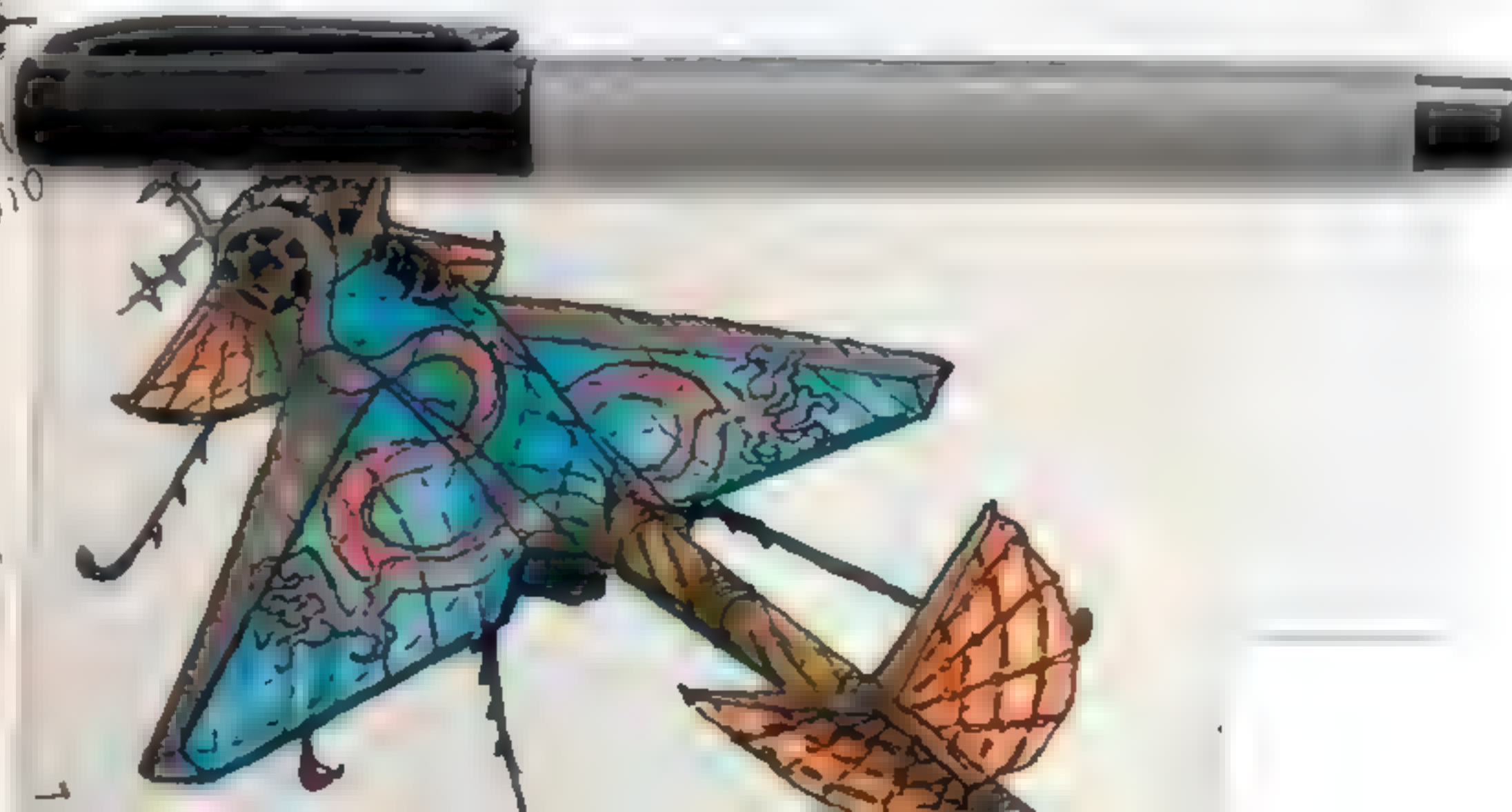
— REMOTE FORTRESS WHERE AN EARTH WING SHOWN. A MOUNTAIN REFLECTED IN ITS WATERS. BENEATH THE SURFACE, A WEIRING FORM. A TENDRIL, PORTAL TO THE UNDERWORLD, THE DRAGON'S PALACE.





While heavily inspired by ancient Chinese culture and mythology, Jade Empire was set in a fantasy world with its own history and rules. The writers created an entire language for the game's eponymous setting: Tho Fan. According to writer Luke Kristjanson, it proved to be more of a headache than a feature and was a barrier to efficient writing.

"Focus on tone and rhythm and rules for how a language should sound, not the actual vocabulary," he says.



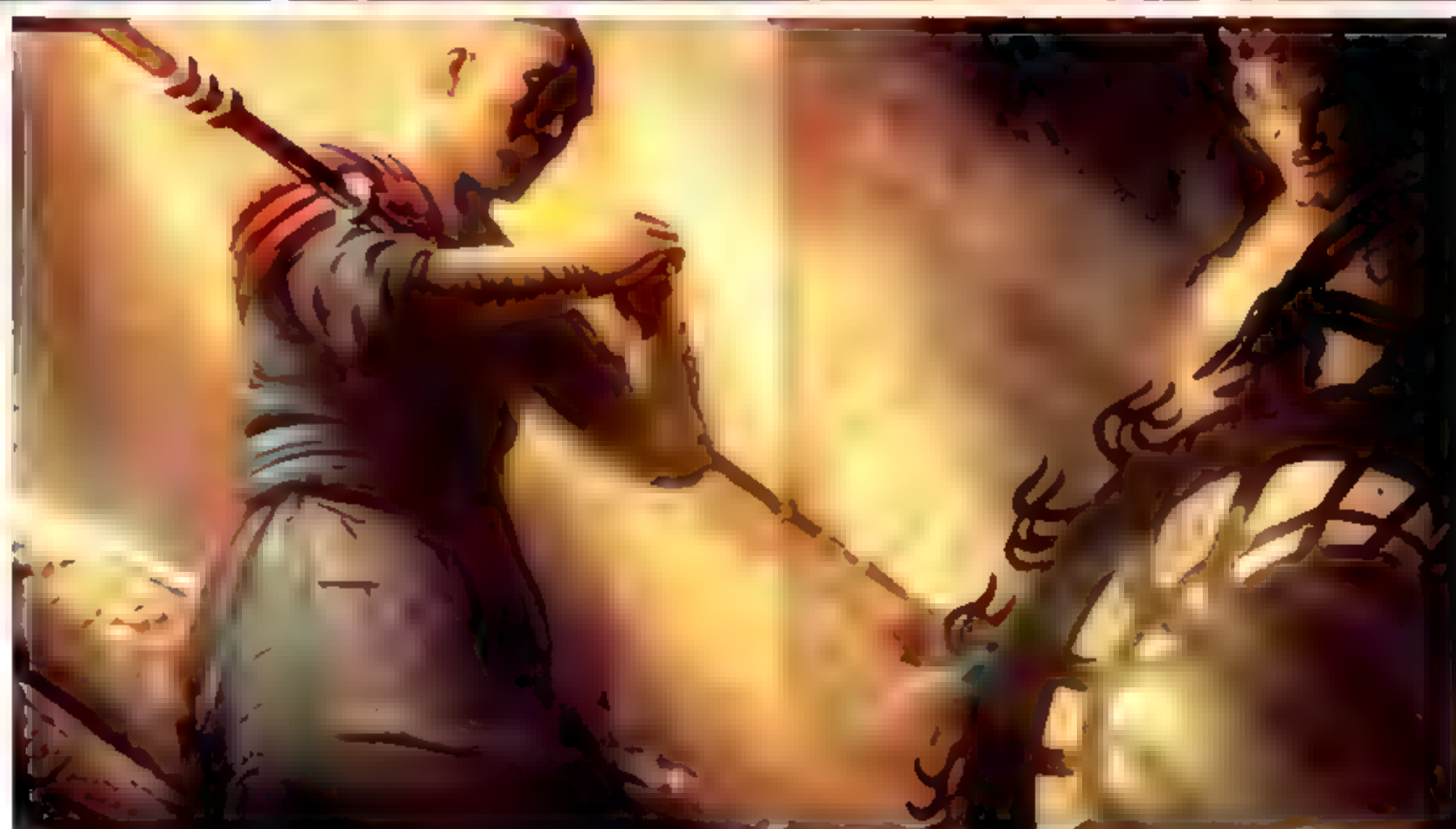








ad Empire's director Mark  
 and his team drew on a variety of  
 influences, including the dynasties of  
 China with the help of the period  
 reconstructor the Han throne. Many  
 dynasties Architecture and landmarks  
 took particular inspiration from the  
 monumental landscapes of the Song  
 period, with Tang and painting, giving  
 the game its color palette. Visual  
 influences extended beyond China as  
 well, pulling from Japanese Tea and  
 Kōmō culture to give the world its







REAL TALES  
OF DEVELOPMENT:  
**AARYN FLYNN'S  
FIRST COFFEE**

**FORMER STUDIO DIRECTOR** Aaryn Flynn was around thirty years old when he had his first coffee; he used to be more of a cola person. Aaryn says *Jade Empire's* development drove him to finally try the brown lyrium:

*We were working late on Jade Empire. And Jim Bishop, the project director, went out and got Tim Hortons. It was a double-double.*

*I'd never had one before. And I tried it at like ten o'clock at night. I worked until four a.m. because I was so jacked up on caffeine.*

*Then the next night, I did it again. And I probably did that for, I don't know, six months straight in the closing months of Jade Empire. Six, seven days a week getting a coffee at night and working till two or three in the morning . . . I'm pretty sure I gained ten pounds doing it, you know, with all the cream and everything and the sugar in there.*

*But it was sweet and fatty and delicious. It was amazing. It was hot. And it was wintertime . . .*

*So now I drink coffee. I have ever since.*











**BIO-TRIVIA**  
**BIOWARE BRIEFLY WORKED**  
**ON A GAME CALLED FIVE**  
**FINGERS OF DEATH**

With *Empire* was the lowliest of  
 feign to A. I. and the just

Every one of the just  
 thing to be, Z. I. and the just  
 to be, Z. I. and the just  
 to be, Z. I. and the just

It was the first time I saw  
 the first time I saw  
 the first time I saw  
 the first time I saw

It was the first time I saw  
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It was the first time I saw  
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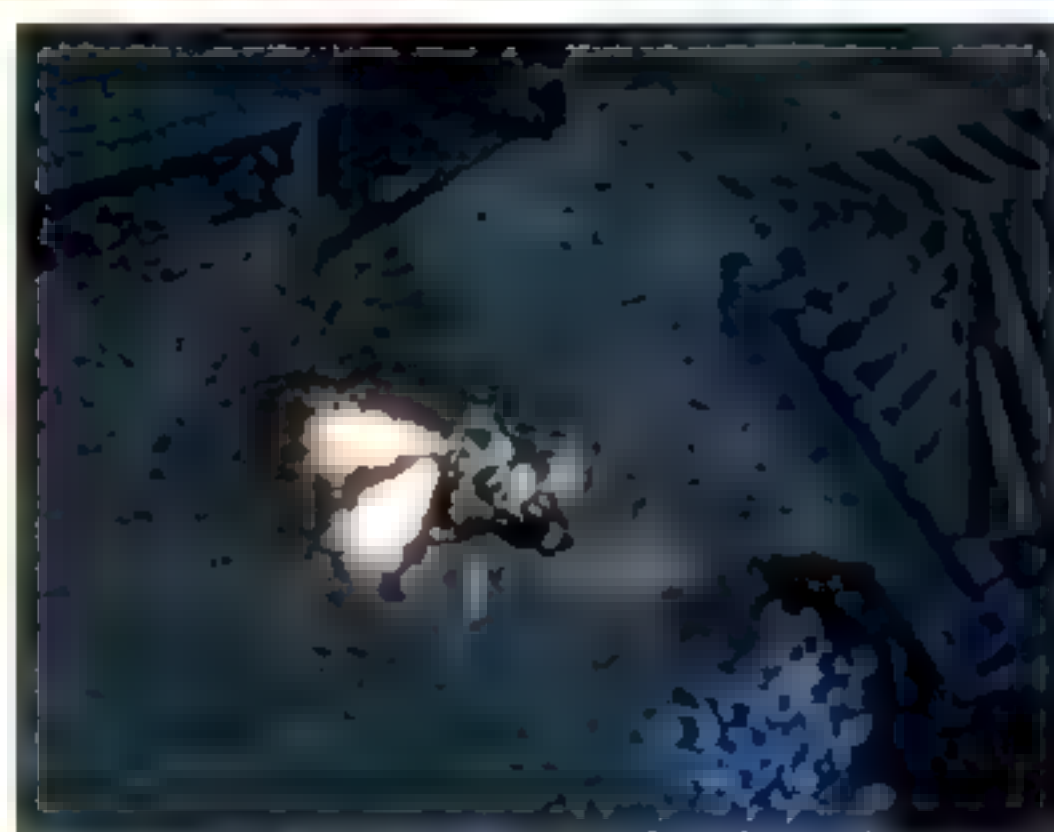
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**Five Fingers of Death!**  
**Five Fingers of Action!**  
**Five Fingers of Fun!!**

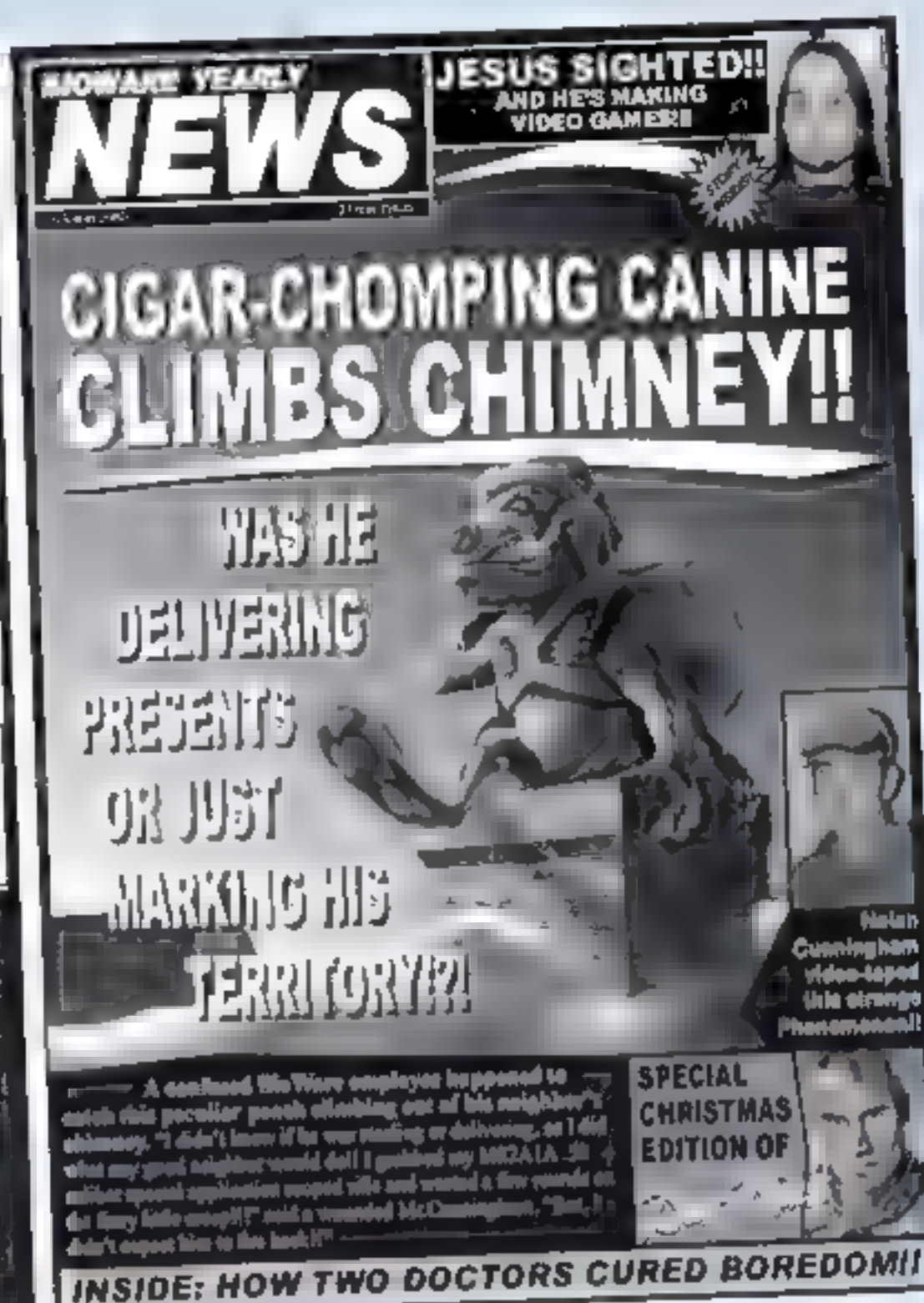
**Five Fingers of Death**  
**The First Kung Fu**  
**Movie RPG Ever Made!!!**



## BIOWARE HOLIDAY CARDS

**IT'S A TRADITION** for companies to send out colorful branded cards to business partners and colleagues during the holidays. Few committed to it like BioWare in the early years. BioWare's holiday cards poked fun at the studio's games, its eccentricities, and especially its eccentric founders. In 2003, a *Jade Empire*-themed card was sent out with tiny cardboard standees of player characters Furious Ming and Wu the Lotus Blossom, as well as Death's Hand and a horse demon. Another in 2007 featured a child Shepard holding Santa hostage with an M-3 Predator, demanding a copy of *Mass Effect* while child Garrus enjoyed a candy cane.

Collected here are some memorable cards from past years.





## YOU MAY RELY ON IT: BIOWARE'S MAGIC 8 BALL

**CHOICES ARE HARD.** Do you side with the quarians or geth? Execute Loghain or let him live?

Is sushi something people might like at the holiday party?

For menu options at least, senior director of business planning and development Richard Iwaniuk kept a Magic 8 Ball in the office he shared with Ray Muzyka. With a shake, the toy would offer up one of twenty answers on a floating die inside; its advice like "You may rely on it," "Don't count on it," and "It is decidedly so" helped with tiebreakers.

A lot of bigger decisions were being made at the time: Where in Edmonton would they move the growing studio? Should one deal be accepted? Should another be taken elsewhere or scrapped altogether?

"We'd have a disagreement. We would have two in one court, two in the other, and, you know, we're arguing in circles, and it's like, okay, let's just ask the Magic 8 Ball," Richard says. "And that's ultimately the decision that we went with. It wasn't life or death by any stretch of the imagination, but we sometimes solved stalemates through the Magic 8 Ball."

BioWare built custom Magic 8 Balls made to look like the white Academy of Interactive Arts & Sciences after Ray Muzyka and Greg Zeschuk were invited into the academy's Hall of Fame in 2011.



**REAL TALES OF DEVELOPMENT:  
YOU WORK AT  
BIOWARE? WHAT'S  
THAT LIKE?**

**WHEN PEOPLE FIND OUT** you work for a game company, reactions aren't always what you'd expect. BioWare Edmonton's director of production Janice Thoms went from writing software for the health insurance industry to programming at BioWare during *Neverwinter Nights*' development. It was a heck of a change, one Janice eagerly embraced. But not everyone understood the appeal:

*I went to a bridal shower, and I didn't really know anybody there except for the bride.*

*Everybody was talking about what they did. There were nurses and teachers. Someone worked at a bank.*

*They asked me what I did. And I explained that I worked for BioWare. They said: "What's that?"*

*When I said it was a game company, I got a lot of blank expressions. They asked what that meant. "What do you do?"*

*So I described my job to them . . . and one of them actually said: "Oh, bummer!"*

*It was a very different reaction than I usually get, because usually, you say that and you get one of a few responses. Older people usually say: "My fourteen-year-old son would love to have your job." That's a standard one which I don't love.*

*Or I get: "Oh, that must be a lot of fun."*

*"Oh, bummer!" was a new one for me.*



## THE MAKING OF

# SONIC CHRONICLES THE DARK BROTHERHOOD

### BIOWARE MADE THE FIRST SONIC THE HEDGEHOG RPG



### KEY FACTS SONIC CHRONICLES: THE DARK BROTHERHOOD

**RELEASE DATE:**  
September 30, 2008

**GENRE:**  
RPG

**PLATFORMS:**  
Nintendo DS

**Developed in Edmonton**  
**Published by Sega**

**THE DARK BROTHERHOOD** MARKED a series of firsts. It was the first time BioWare made a game for a handheld device. It was the first time the studio made a game for a Nintendo console. And for Sega, it was the first time their flagship character, Sonic the Hedgehog, would appear in an RPG.

*Sonic Chronicles: The Dark Brotherhood* saw BioWare applying its unique story approach to the Sonic universe in a quest for the stolen Chaos Emeralds that spanned both Sonic's world and an alternate dimension known as the Twilight Cage.

*Chronicles* marked a departure from typical Sonic gameplay, as players explored detailed, looping environments, interacting with characters and battling enemies using turn-based RPG mechanics.

#### RAY WAS A BIG SONIC FAN

BioWare cofounder Ray Muzyka was a huge fan of *Sonic the Hedgehog*. The longtime PC gamer only really got into console gaming as an adult, and Sonic was what hooked him.

"My first console fascination was really around *Sonic*," Ray says. "I became obsessed with it on the Sega Genesis."

When former president of LucasArts Simon Jeffrey, who was instrumental in the creation of *Knights of the Old Republic*, moved on to Sega of America, Ray, looking for new projects that would break the mold a bit, jumped at the chance to pitch something with Sonic.

"Wouldn't it be kind of wacky but interesting to make a mobile 'E for Everyone Sonic RPG'?" he thought.

So they did.

#### NEW ROLE, NEW RULES

*Sonic Chronicles* was the first project Mark Darrah led at BioWare. The longtime programmer made the jump to executive producer for *The Dark Brotherhood*, a role that required him to drive the creative direction as well as managing the team

and programming when necessary, a hybrid role he embraced in typical Mark fashion.

"One of my favorite memories was my first introduction to Mark Darrah," recalls John Epler. John began his BioWare career doing quality assurance on *Sonic*. Mark was the executive producer. John should have been intimidated. "But the first time I met Mark he was sitting in his room on the floor, cross-legged, playing the game on his DS dev kit, because the DS dev kit had a cable that was maybe a foot and a half long, so he couldn't bring it anywhere else. And that was the most comfortable way for him to play the game." John was . . . floored to meet a boss who would work on the floor.

"He didn't see himself as better than or above everyone else. He's just part of the team."

*Sonic's* team was small, with under thirty people at its peak. The team's size and the scope of the game made it feel more like an indie project for the developers working on it. Many took on challenges they'd never attempted in games before. Others, like John, were new to game development entirely.

"There's something really amazing about small projects like that," Mark says, "where you literally know everybody intimately and everyone is wearing multiple hats."

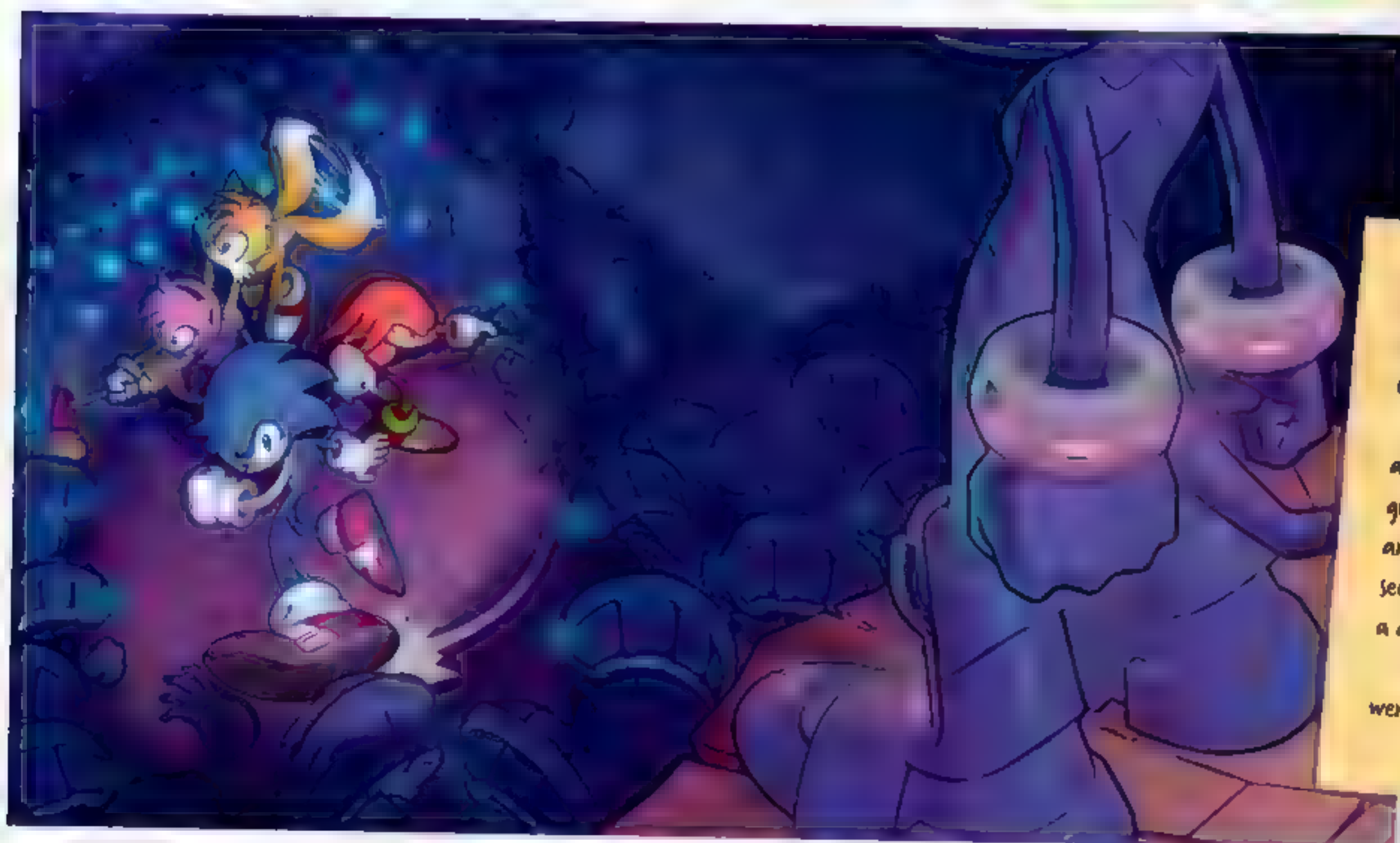
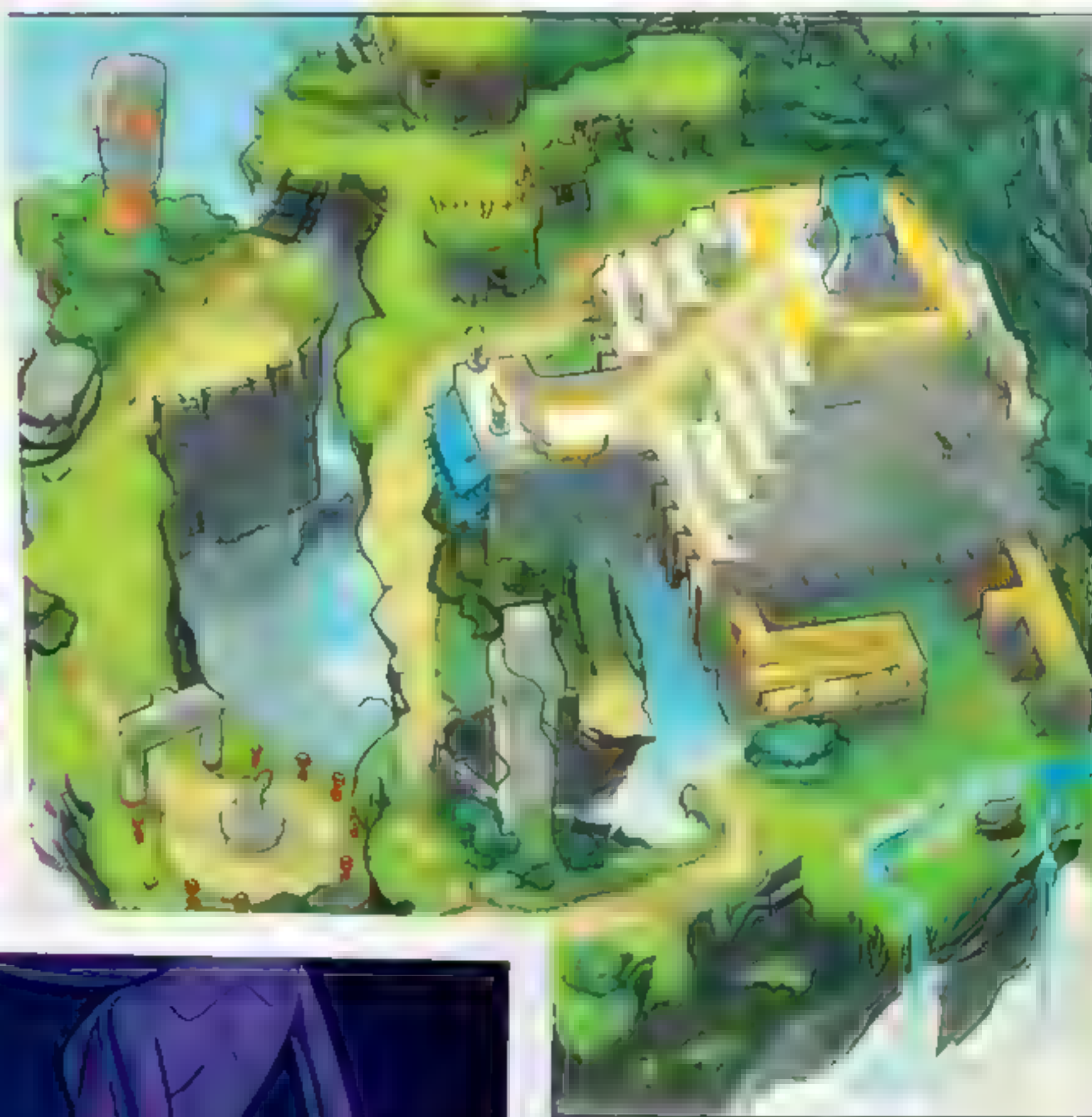
#### NEW TO BIOWARE'S TALES? START WITH TAILS!

Mark says that *The Dark Brotherhood* was the game it needed to be, but it just didn't find the right audience.

"I think that we should have marketed it as: 'This is your introduction to BioWare. You're eleven and you're allowed to buy whatever game you want. Get your parents to buy you this game, and we're going to teach you that RPGs are awesome!'" Mark says.

"But we didn't market it that way. We marketed it pretty much as a BioWare game, and so we got a lot of people who bought it that were looking for *Mass Effect*. And it's not *Mass Effect*."



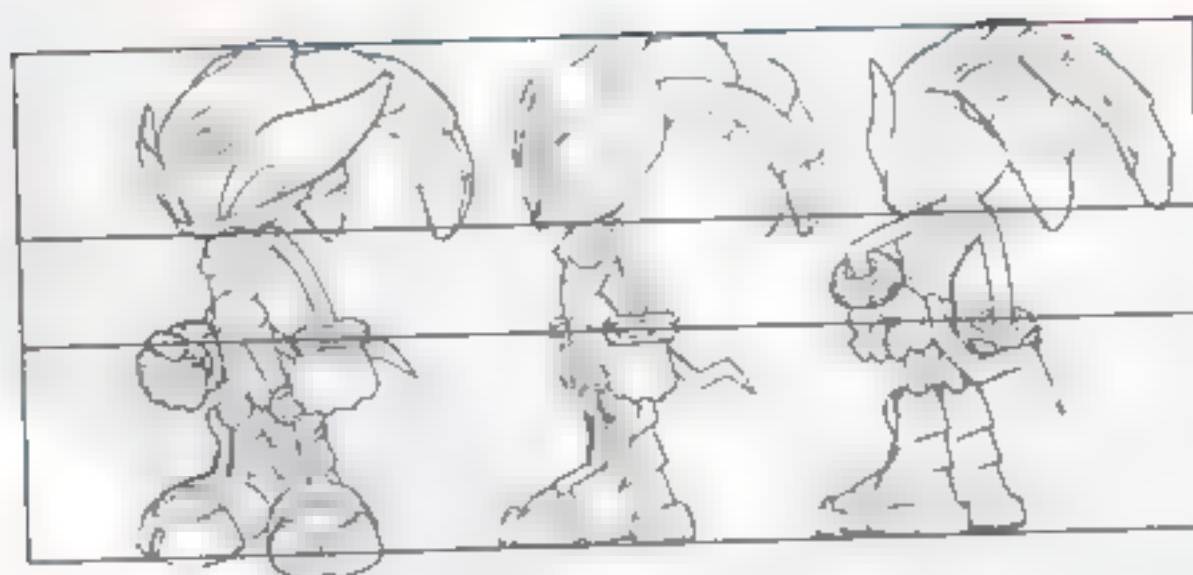
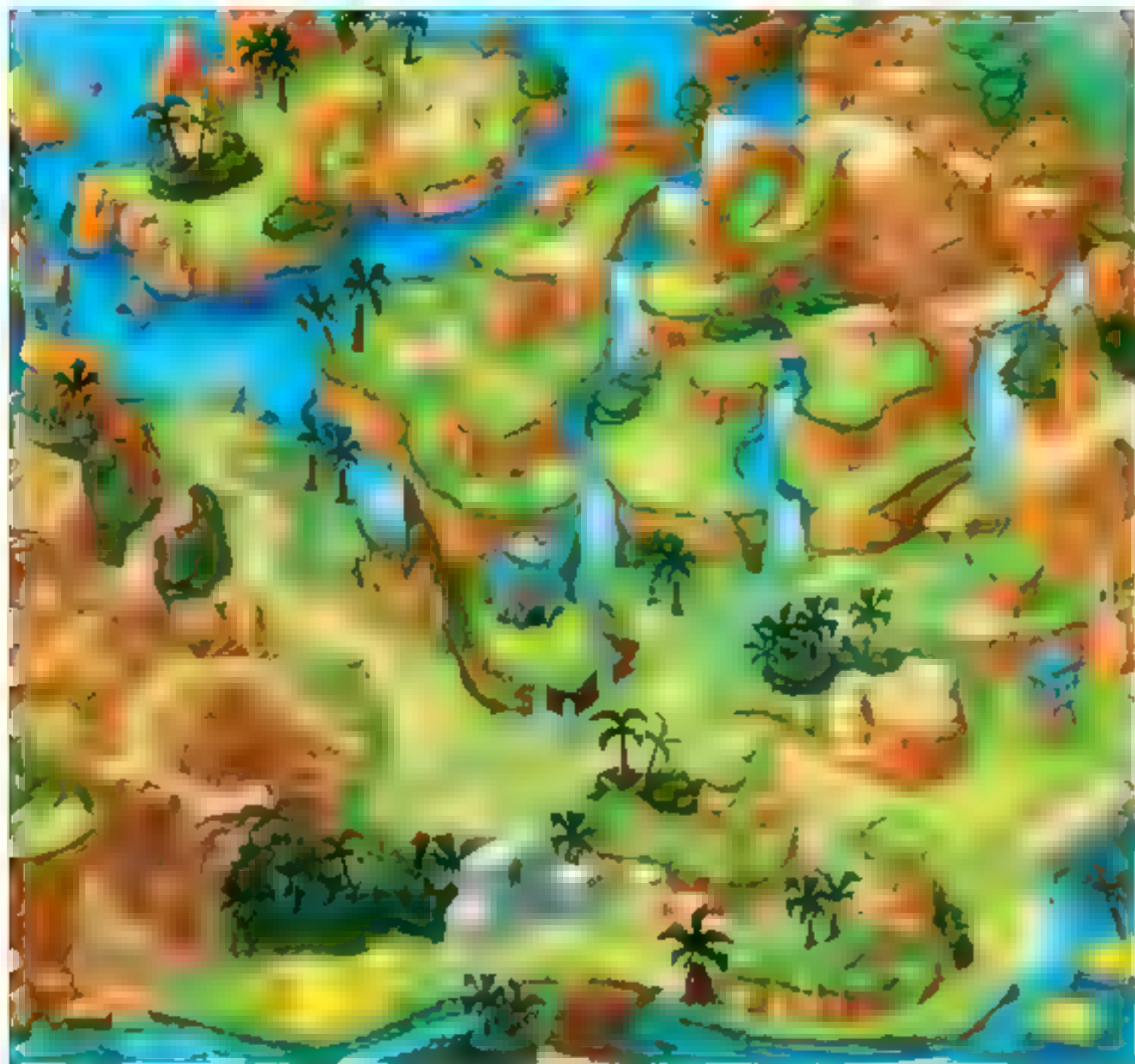


Nick Thornborrow was finishing up an art degree when BioWare approached him with level art work on a new, unannounced game.

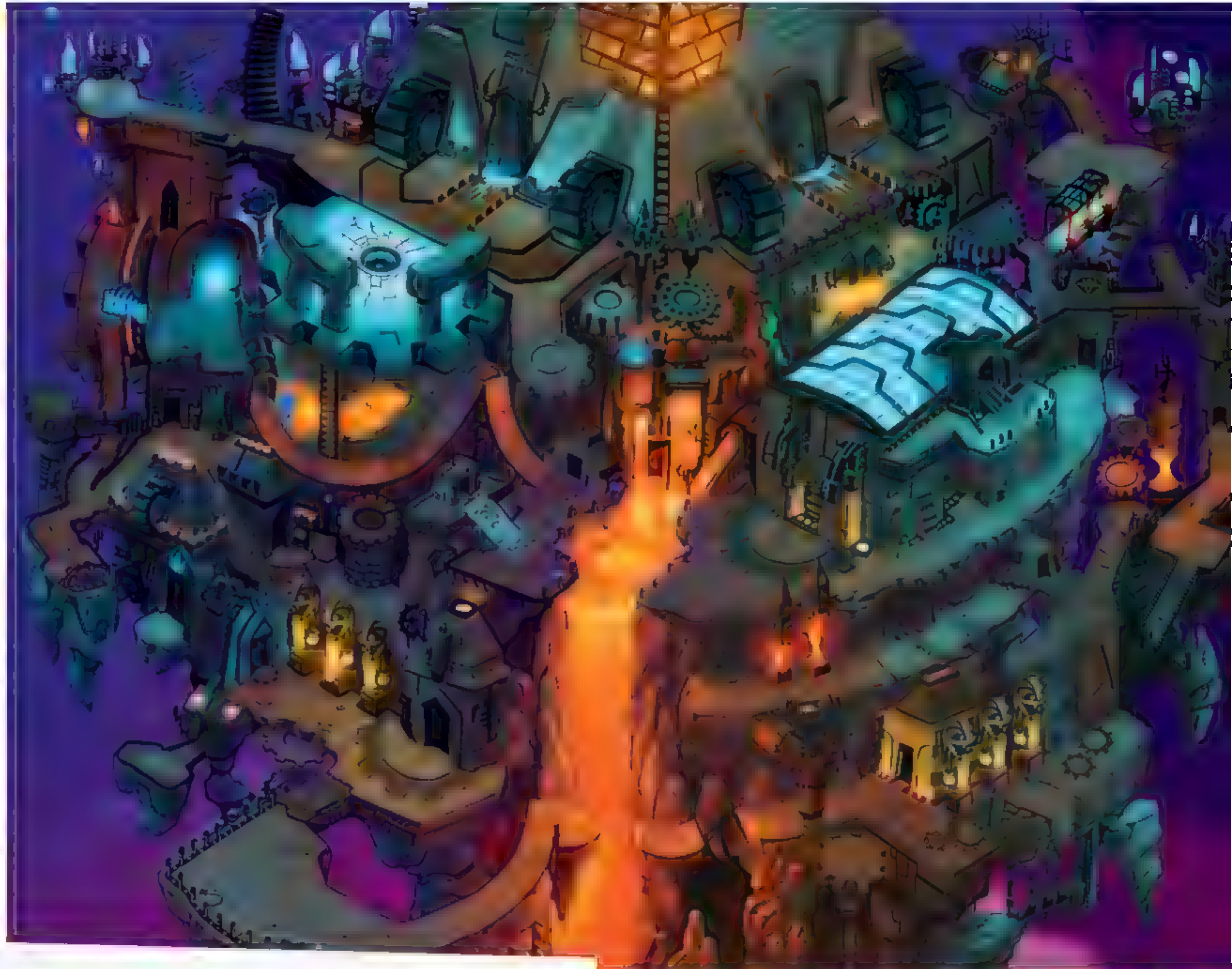
"Looking at their entire catalog, I was like, 'What are they contacting me for?'" says Nick, whose background was more in animation and storyboarding. His art, with strong, simple lines and brighter colors, didn't seem to fit; if they were hiring him, it would either be a departure for Nick or a departure for BioWare.

It was only after he got the job that he learned they were making a Sonic game.









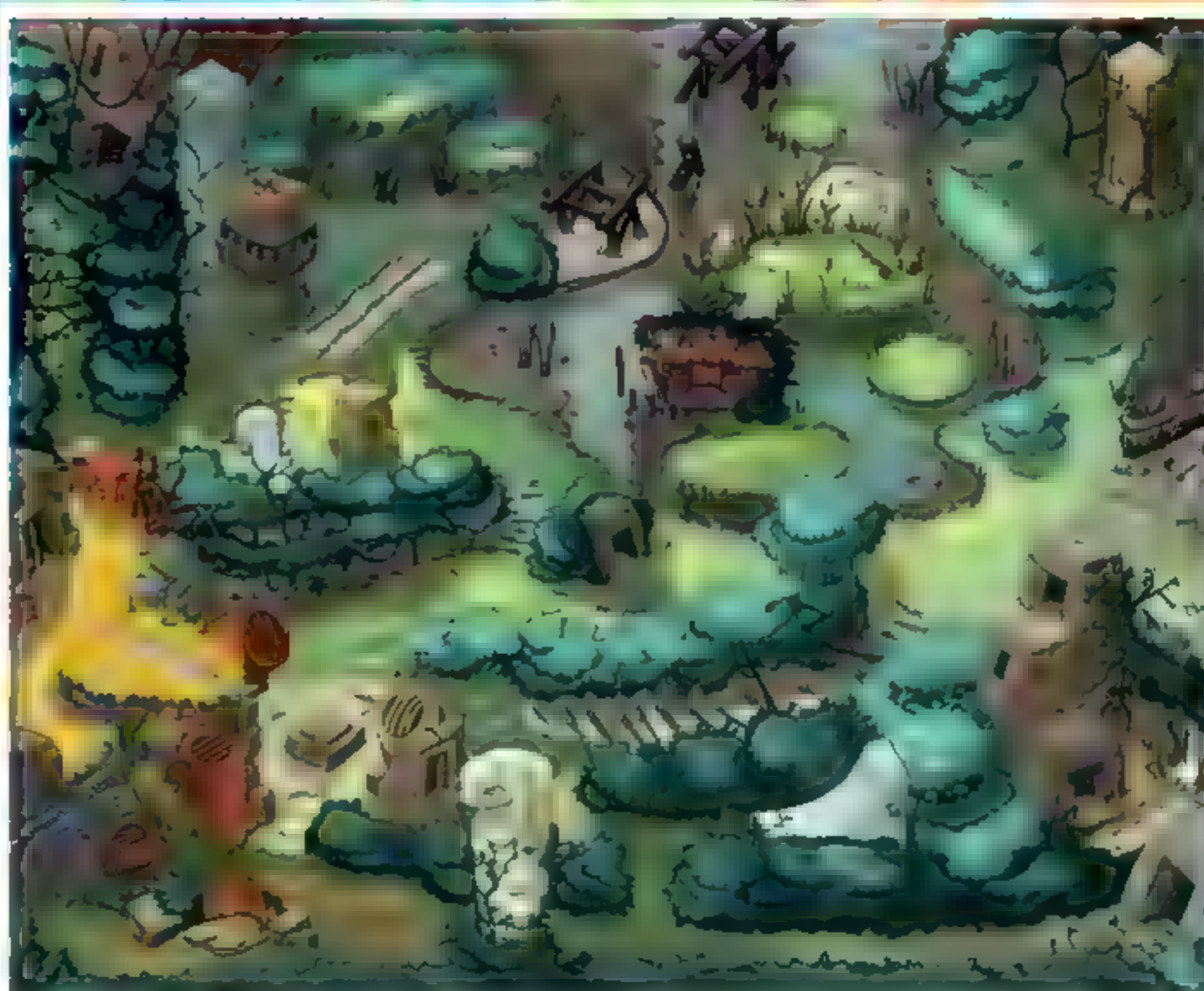




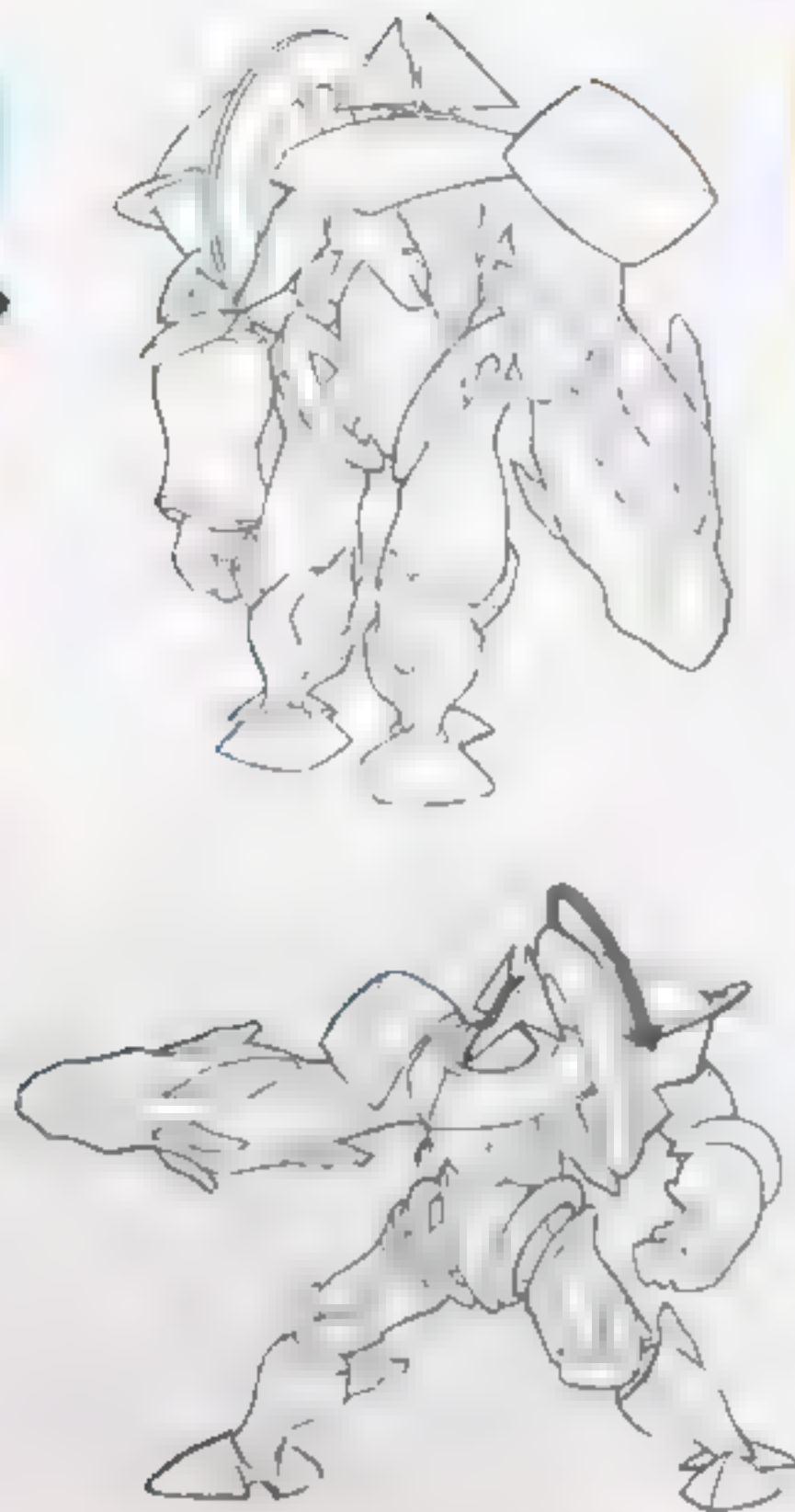
## SONIC LEVELS LIKE AMUSEMENT PARK MAPS

**SONIC CHRONICLES: THE DARK BROTHERHOOD** featured expansive, colorful levels in a hand-painted style inspired by real-world amusement park maps.

"With theme park maps, they're not drawn like schematics. They've got a lot of personality and character," *Chronicles* level artist Nick Thornborrow says. "That was kind of the vibe we were going for: these condensed worlds with all these little set piece things to do, like the loop-de-loops."







### BIO-TRIVIA

**MARK NEVER WASHED HIS TEAPOT**

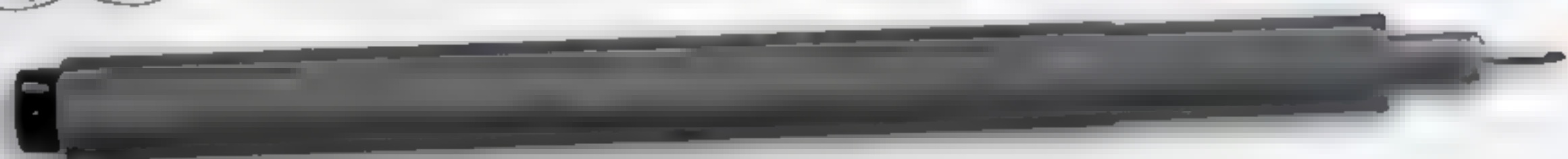
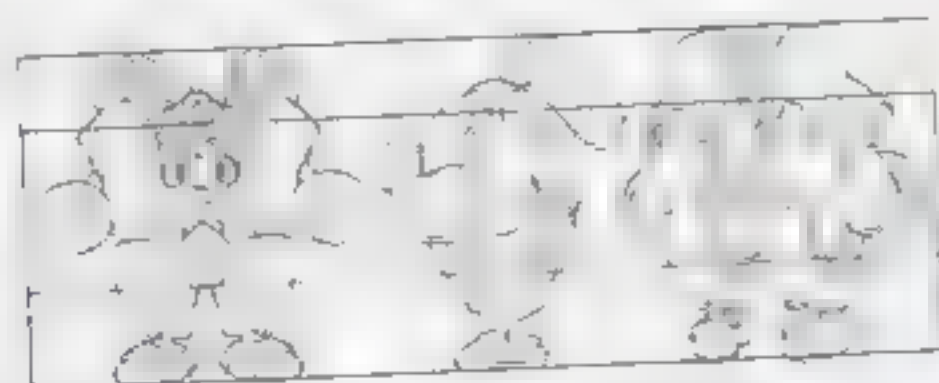
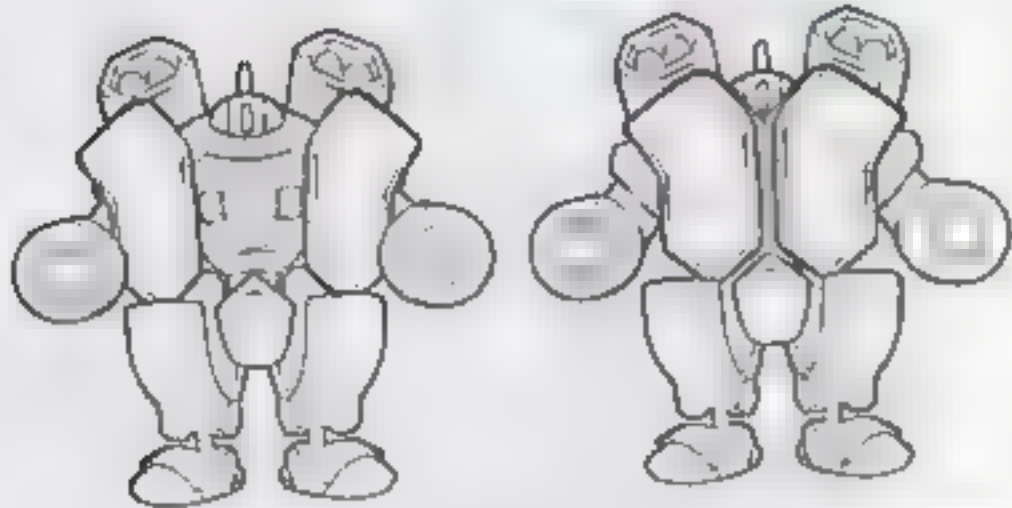
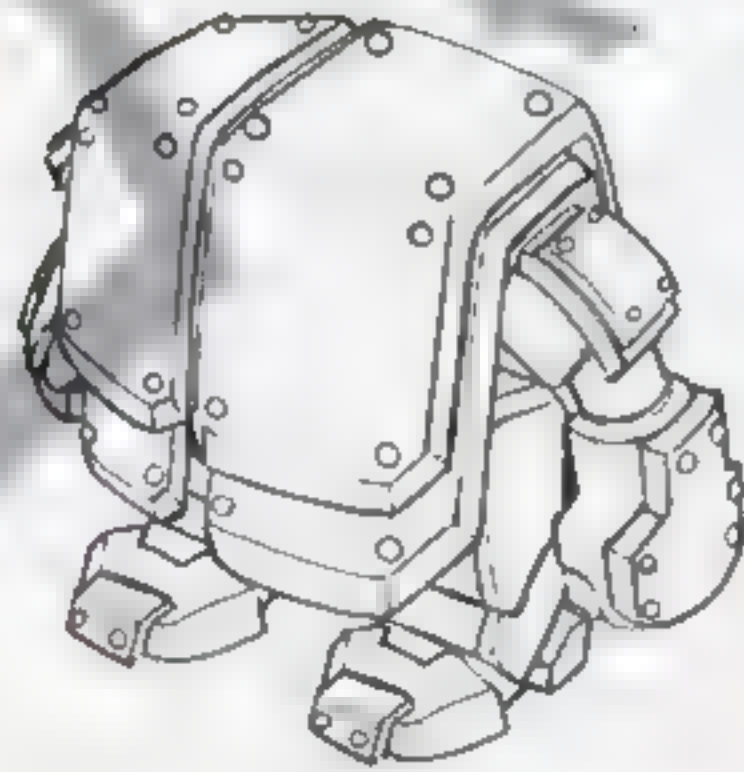
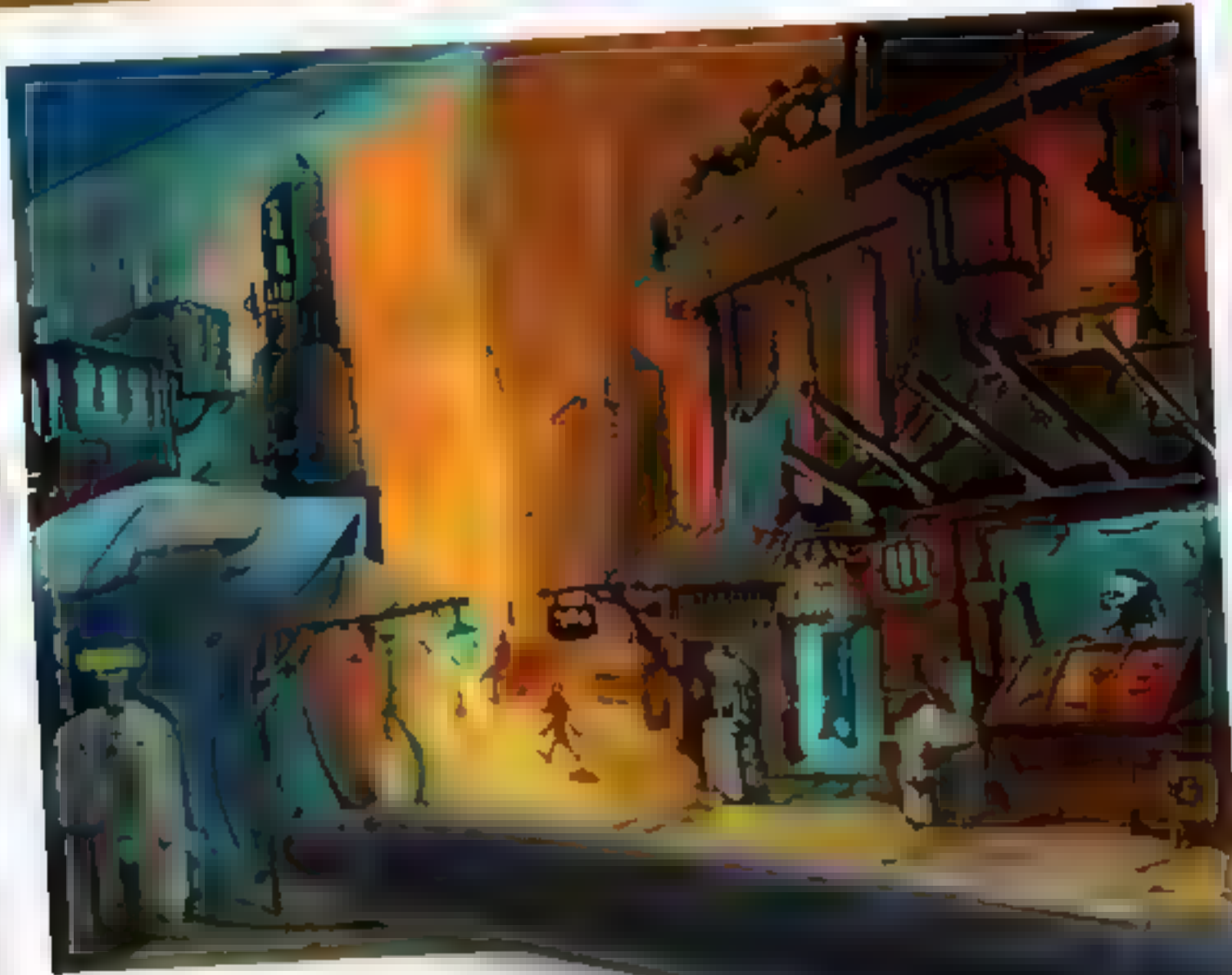
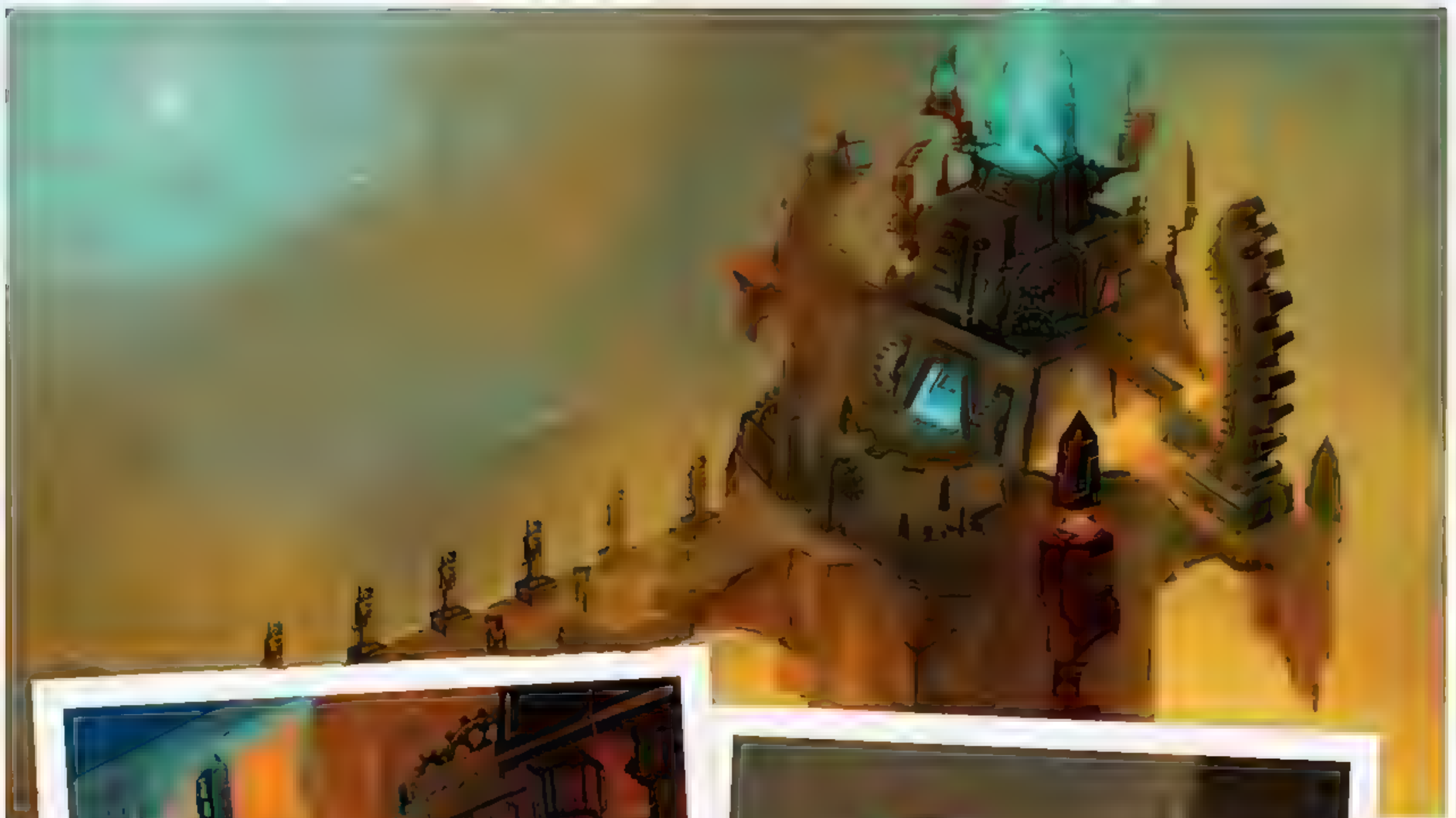
During *A*'s development, producer Mark Zuckerman's teapot at work for nearly ten years is featured in his first *Sonic Chronicles* cutscene. The *Dragon Age* team shipped, refusing to even wash it.

"The teapot is a feature on Mark's desk with the sort of consistent relevance to him that is almost impossible to shake off when development is stuck. I questioned, sync up with him."

The teapot finally broke tragically during *A*'s development. But Mark has since been offered a new one. After a bottle year, it was ready to fly.









## NEVERWINTER NIGHTS AND WEEKENDS

MANAGING A DREAM JOB WITH THE NEED TO SLEEP AND NOT WORK SOMETIMES

WHEN GAMEPLAY DESIGNER Brenon Holmes moved to the city to work at BioWare, he was nineteen years old and found himself practically living at the Whyte Avenue location.

"I slept under my desk. I had a bathrobe at work and a change of clothes. I showered in the shower. Because I lived right nearby," Brenon says. "At the time it was really fun. And I really loved what I did. And I still love what I do." But over time, practically eliminating life from his work-life balance took its toll.

The longest stretch of time Brenon spent in the office was three whole days, only going outside for food. No one asked him to do this. But Brenon's job, basically porting the D&D manual to a video game, meant he could largely work when he wanted, and he wanted to work a lot.

At the time, Brenon was convinced that crunching helped his productivity—until the next morning came and he'd review code he'd written at three a.m., wondering what the hell he'd been thinking.

"I don't tell young people that story because I don't want to encourage that behavior," he says. "Looking back on it, there were people that were trying to kick me out of the office. And I probably would be one of them now."

On *Anthem*, Brenon saw familiar patterns in junior developers. He'd encourage them to go home. But he knew they probably wouldn't. "I know what you're gonna do," he'd think. "You're gonna stay here all weekend. You're gonna work your ass off." He'd caution that pushing too hard was a good way to burn yourself out.

Like so many video game companies, pulling marathon shifts to get things done was in BioWare's DNA from its earliest days.

"For everyone, BioWare is basically a dream job," Greg Zeschuk told the *Edmonton Journal* on the eve of *Shattered Steel's* release. "We don't have set hours; we have tasks. If you have to stay to midnight, you stay to midnight and if you don't have to come in the next day, you don't. We're loose, but we also have very clear goals to accomplish."

Often, Greg and cofounder Ray Muzyka would crunch alongside the rest of the team.

"Ray and Greg never asked anybody to do anything they weren't doing," former studio GM Aaryn Flynn says. "They were both sympathetic to the need to have a work-life balance, but at the same time, they were working themselves."

On earlier projects close to release, a concept called "sympathy crunch" was even floated, where developers who finished their tasks would stay in the office to support those who were still pushing hard.

All this time spent at work meant the team bonded, giving the studio a clubhouse feel—but crunching also led to burnout and forced developers to make significant personal sacrifices.

Aaryn's wife went into labor with their firstborn after he worked a Sunday shift. "She went into labor six hours after I finished my last bug on *KOTOR*,"

he says. "She spent the day with me at work. It was one way to try to bring a bit of balance back to work-life. I remember she was reading Harry Potter on the couch in our office."

### THE PATH TO ELIMINATING CRUNCH

Like Brenon Holmes and Aaryn Flynn, Casey Hudson worked too much when he started at BioWare. Now the studio's general manager, Casey remembers being a junior developer on *Neverwinter Nights* and not understanding why anyone would want a life outside of video game work.

"I was just like: 'Oh wait, I get to be here with a bunch of friends and awesome computer equipment making video game stuff. Why would I want to be anywhere else?'" he says. "It was genuinely a lifestyle as opposed to a job, [so] then I pulled crazy hours for many years straight because I wanted to."

But that kind of approach to work isn't sustainable—not for an individual or a team.

"It just doesn't work for a bigger, more mature company," Casey says. "I have a family. A lot of people from back then have families."

The massive pressures and workloads that come with finishing a game haven't gone away, but the ways BioWare deals with these challenges have changed. The company has been working in more recent years to reduce crunch through better production tracking, as well as adjusting project scope and milestone dates to maintain a sustainable workload, Casey says.

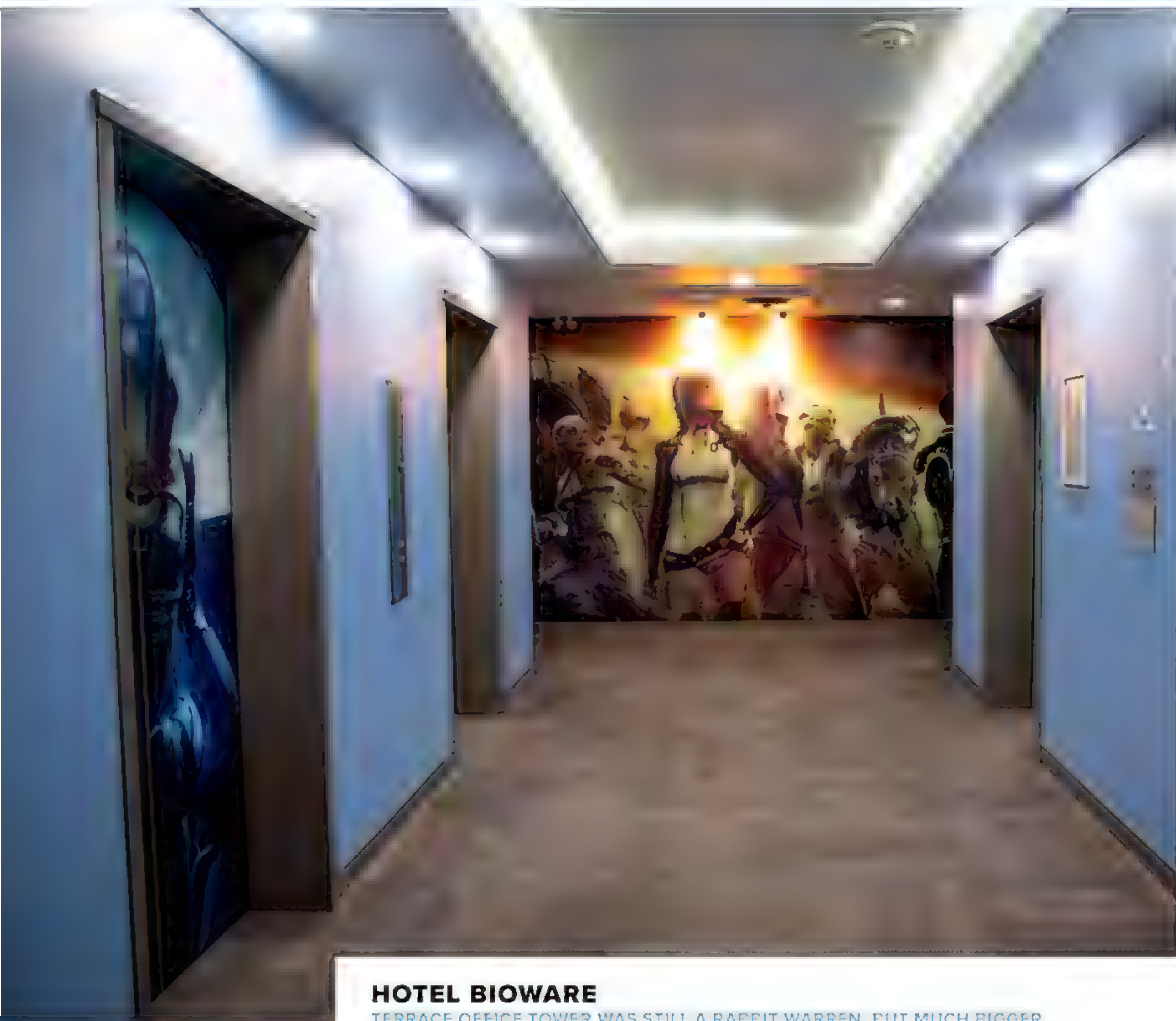
"We've had to figure out a different way to achieve the same kind of effect: of being experimental, trying things, having fun, and really pursuing excellence."

"I SLEPT UNDER MY DESK. I HAD A BATHROBE AT WORK AND A CHANGE OF CLOTHES. I SHOWERED IN THE SHOWER . . . AT THE TIME IT WAS REALLY FUN. AND I REALLY LOVED WHAT I DID. AND I STILL LOVE WHAT I DO."

—GAMEPLAY DESIGNER  
BRENON HOLMES







## HOTEL BIOWARE

TERRACE OFFICE TOWER WAS STILL A RABBIT WARREN, BUT MUCH BIGGER

**AFTER SEVERAL YEARS** sweating it out in BioWare's increasingly cramped Whyte Avenue digs, the studio decided in 2003 to move its expanding roster of developers to a larger office on the south side of Edmonton.

The move was controversial, as the old studio's location was among the best places to work in the city. It was central. And just stepping outside the doors of the Whyte Avenue location put developers within walking distance of dozens of cool restaurants, bars, and shops.

BioWare chose to move into four floors of the Terrace Office Tower: a squat rabbit warren workspace, attached to a hotel, stuck in the middle of two busy thoroughfares. Walking anywhere, especially in winter, was a bit of an ordeal, as even the closest amenities required a mad dash across three lanes of traffic.

When writer Patrick Weekes flew their family, including future BioWare editor Karin Weekes and their newborn son, to Edmonton in January for a job interview at the studio, their first introduction

to BioWare life was huddling for warmth in the bunker that was the new office.

Patrick and Karin remember trying to explore Edmonton with their newborn after Karin got stir crazy from being cooped up in a hotel room for four days.

"We pushed him across Gateway Boulevard in the snow in a giant, big industry-tested stroller in -30 weather to get from the hotel to Humpty's [Family Restaurant] across the street," Patrick says.

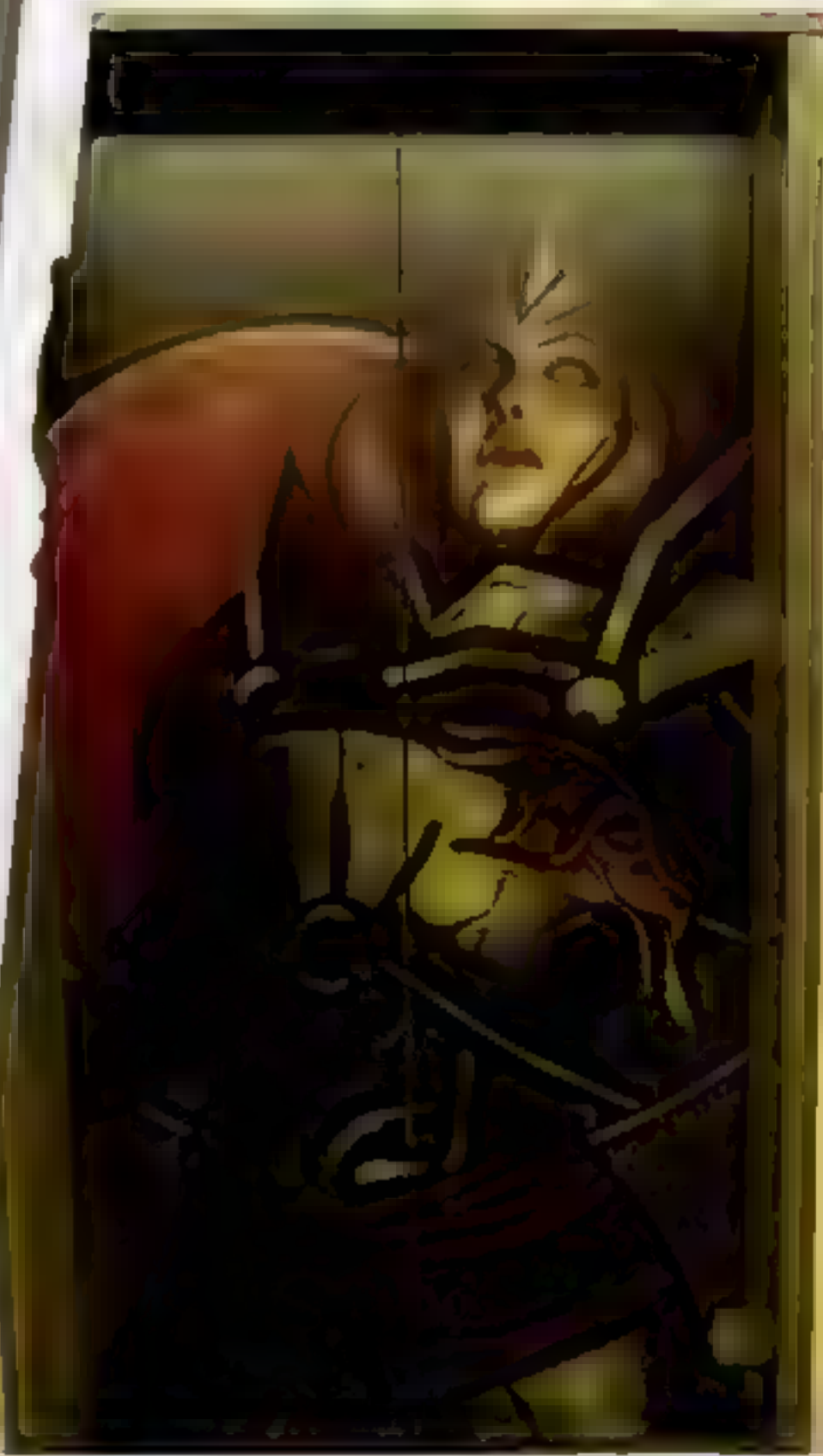
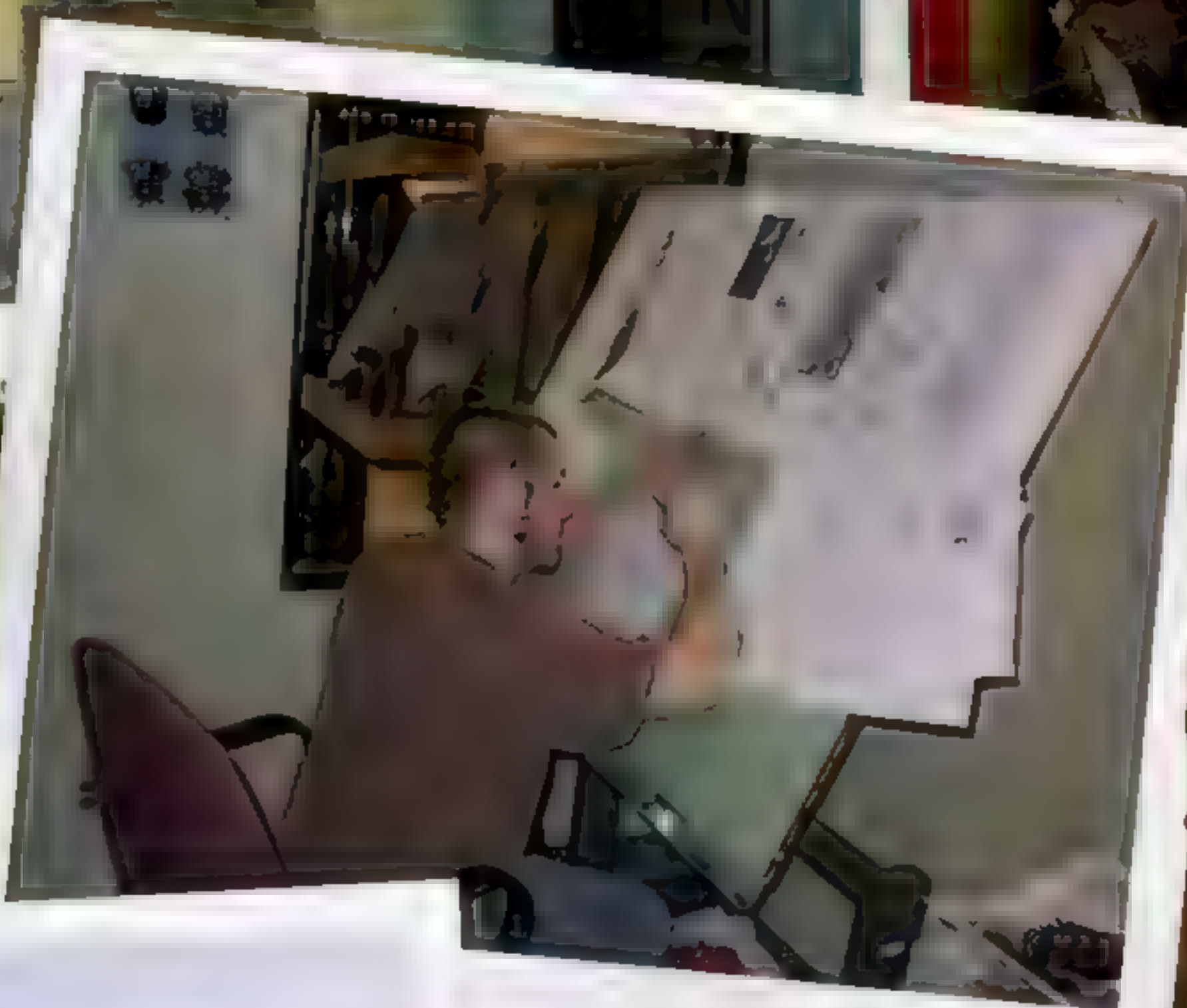
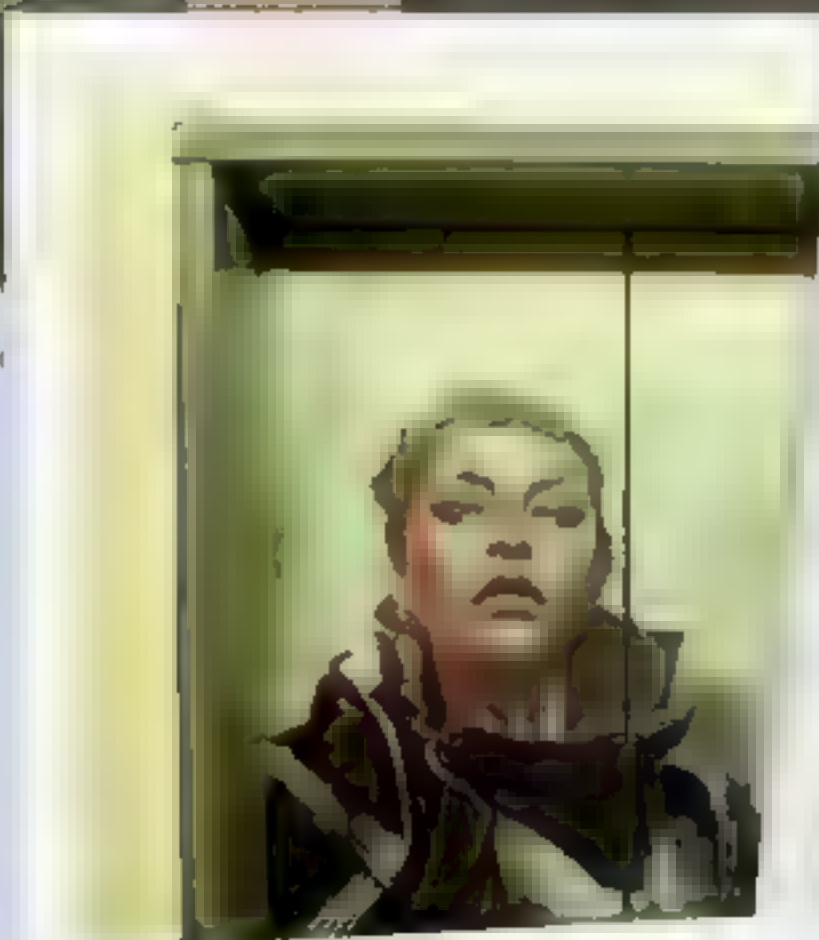
They didn't go out again on that trip.

But the new building had its charms. Being connected to a hotel meant easily booking ballrooms for studio meetings. Holiday parties could be held there too, meaning those who had partied a little too hard could easily retire to a hotel room subsidized by the studio.

There was also a movie theater and a pub, as well as plenty of power and space for the growing development team.

Oh, and working climate control.





Bioware's Tower City Tower is a  
 an Exhibition with a display of  
 the from the space to be able. At  
 and a number of other things. Some  
 offices were packed with reference  
 materials, including video and  
 games, books, toys, and pretty much  
 everything that people might have  
 made. Even the elevator doors of the  
 Dragon Age and Mass Effect floors  
 were reskinned with comic book art. As  
 over time, the developers got used to  
 confused looks from visitors to the  
 building's depth and meaning of offices.







## THE MAKING OF

# REVOLVER



### BIOWARE'S FLUCTUATING FOLLOW-UP TO JADE EMPIRE



#### KEY FACTS REVOLVER

**RELEASE DATE:**

Unreleased

**GENRE:**

Action RPG

**PLATFORMS:**

Unknown

Developed in Edmonton

Status: Canceled

THERE WAS GOING TO BE a *Jade Empire 2*. A project code-named *Revolver* started out that way at least.

"At first, *Jade Empire 2* was going to be a direct sequel to *Jade Empire*, and then it turned from that into: What if it was a sequel but with a much more open world?" says writer Patrick Weekes, who was hired to work on *Revolver* alongside Luke Kristjanson and the game's lead writer, Mike Laidlaw.

At the time, other studios were promising open-world role-playing experiences, and *Revolver* seemed like a good way for BioWare to move in a similar direction.

#### JADE MODERN

Patrick left *Revolver* to help finish writing *Mass Effect*, only to come back to find *Revolver*'s concept was pivoting yet again.

"*Jade Empire* turned into *Jade Modern*. It was going to be a modern take in the same world, so it was the world of *Jade Empire* one thousand years in the future, taking place in a city reminiscent of Hong Kong, and the Horse Lords would be driving through the desert on dune buggies instead of riding horses," Patrick says. "And I was like . . . Okay, I can make that work! I came to BioWare to write followers and write people kissing and telling each other they love each other, and I can do that with dune buggies just fine."

In *Jade Modern*, magic had disappeared from the world. The game would tell the story of how it came back. But at some point, any explicit links to *Jade Empire* were abandoned altogether. *Revolver* would instead become a spiritual successor.

"It was going to be the same world but we would never mention it, because people were not as confident in *Jade Empire* and didn't feel as excited about it," Patrick says.

Now *Jade Modern* was the story of a rogue protagonist named Cole (or Carver) taking on the shadowy Internal Security Agency, as creatures fueled by something called Tempest Energy swarm the streets of a near-future Hong Kong-style city known as Phoenix Gate. Until that changed too, to

a city called Meridian. "Because if you're making a video game, at some point you will have a city called Meridian," Patrick says.

"Morale definitely took a hit each time we rebooted. At one point, Laidlaw told me we were rebooting (again) and I just responded to him with 'Okay, we have to go to Starbucks because I'm not doing this without cookies.'"

#### PUTTING THE ACTION IN ACTION RPG

Gameplay similarly churned over the course of *Revolver*'s development. What began as a martial arts-focused RPG that built on the style and systems of its precursor morphed into a modern action game with light RPG elements where characters used guns and swords in tandem.

One standout mechanic in later iterations of *Revolver* was something called a "rage mechanic." Cole (or Carver) would collect Tempest Energy by killing creatures, filling an energy bar.

"When Cole reaches the maximum state on the tempest bar, he enters rage mode," read the design docs from a later iteration of *Revolver*. "Phoenix-class awakened channel energy from the tempest through destruction and violence, this energy accumulates in their bodies and drives their internal health-regeneration abilities until they release it for explosive energy attacks."

#### MOURNING A PROJECT IN SECRET

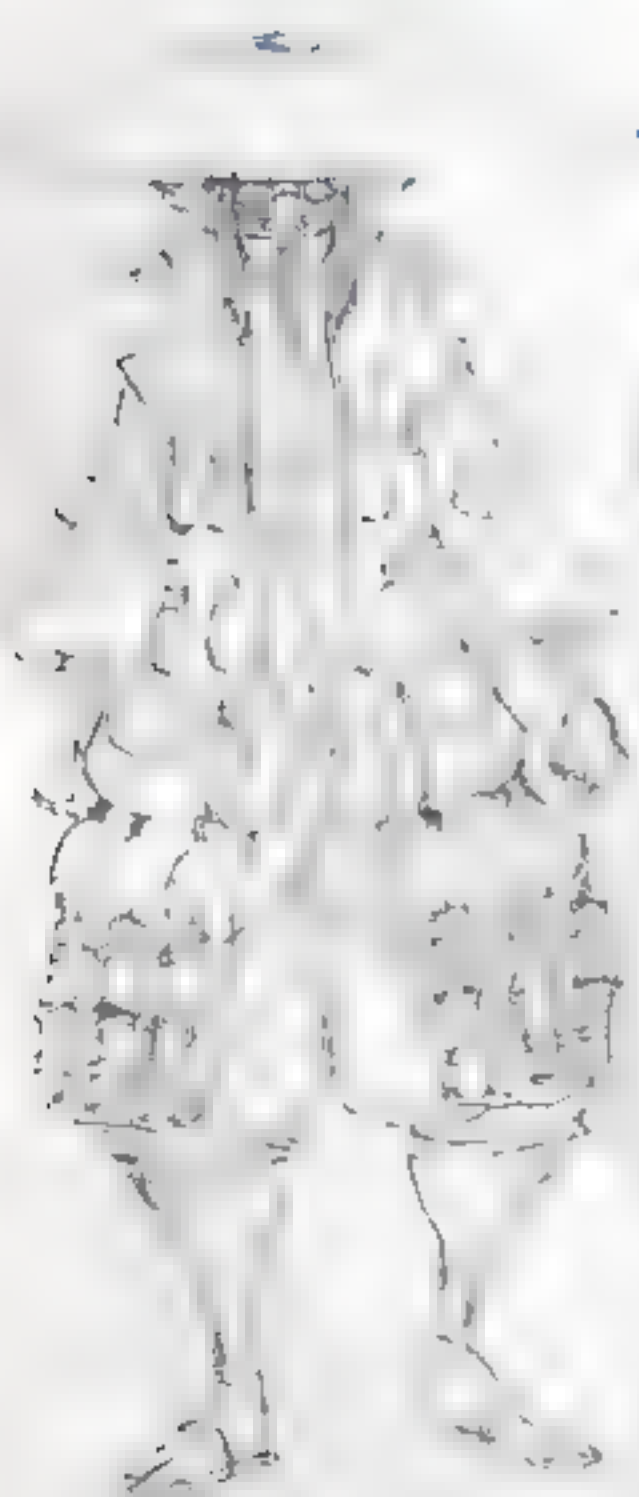
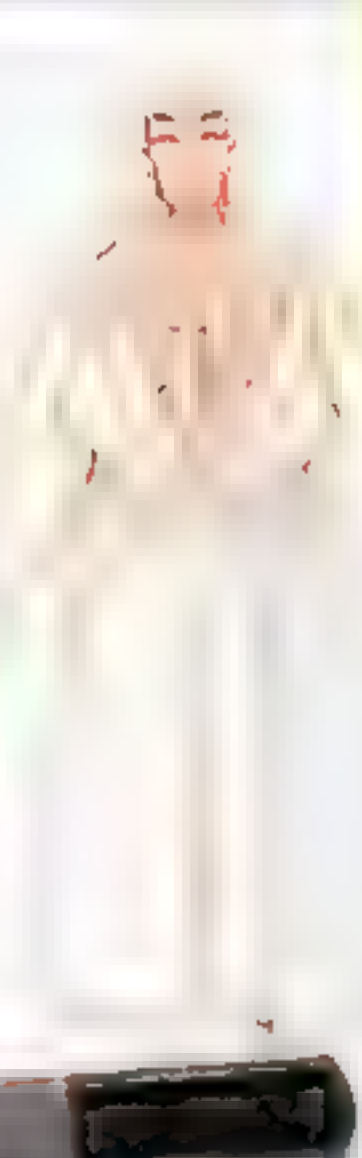
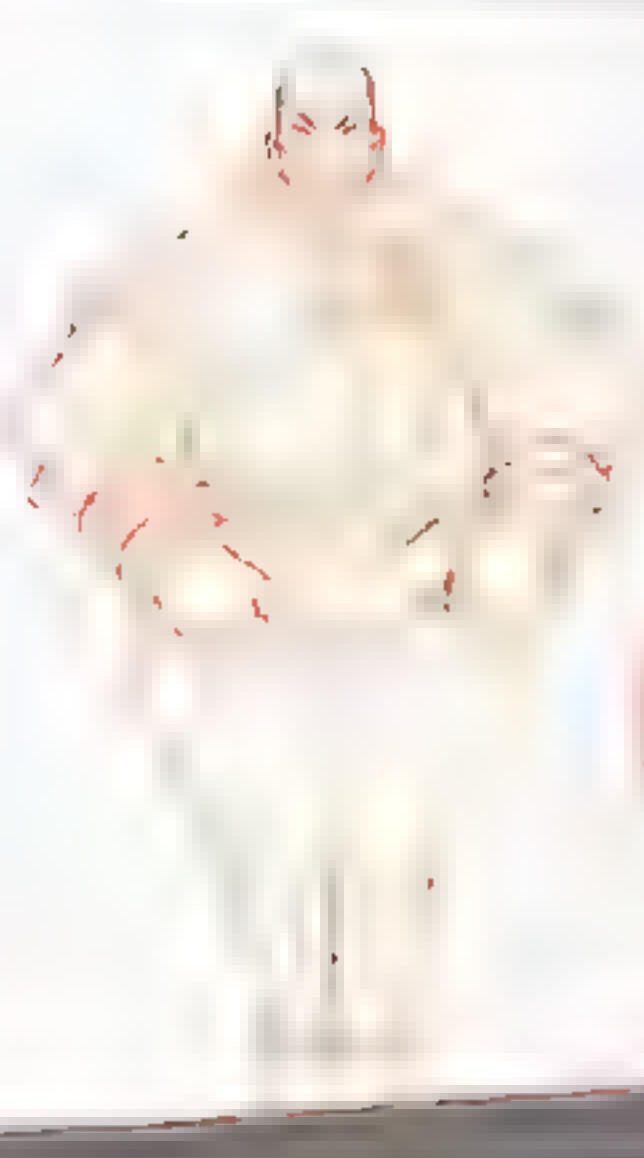
As team members began peeling off to help out on other projects, it became clear *Revolver* would be canceled, or at the very least, shelved indefinitely. When that day came, it was hard for the team who had put so much into the game, trying to make it work.

"When a project that hasn't been announced gets canceled, gets shelved, you can't mourn it," says Patrick, who estimates they wrote close to a hundred thousand words on *Revolver*. "I wrote pitches for the characters. I wrote the test conversations. I explored romances, and it's tough to do all that, and then lose all that and have it be in private."

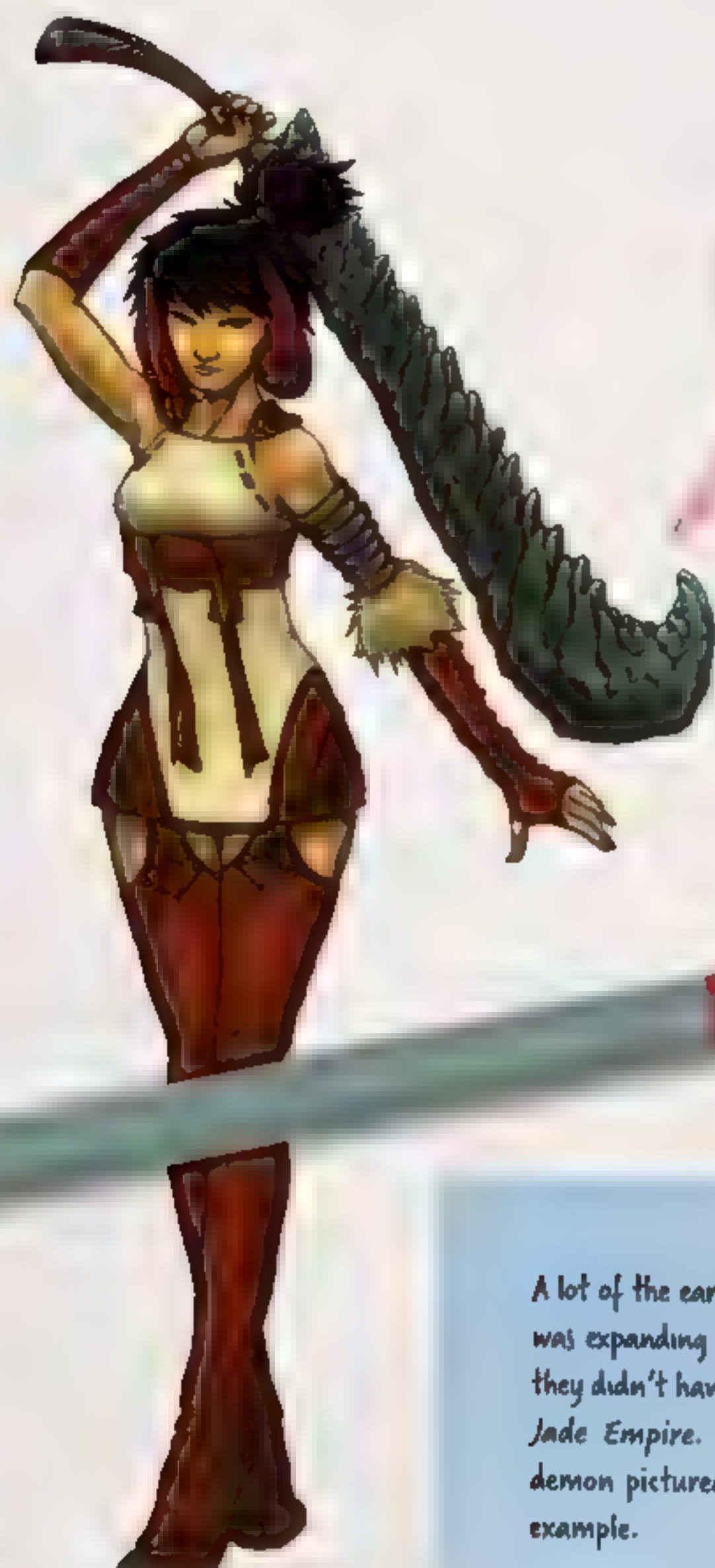




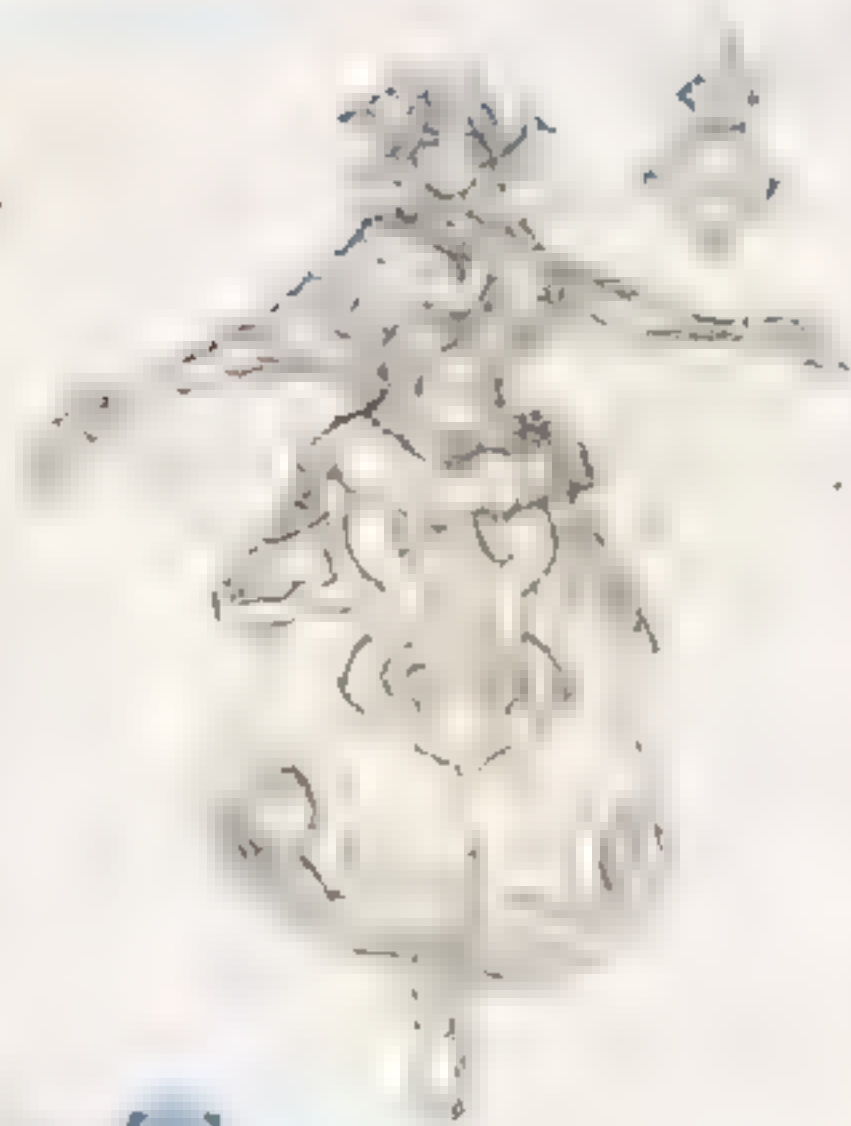
Early concepts of Revolver stuck closely to Jade Empire's style and setting. As a true sequel, the initial vision was to expand everything that made the original such a cult favorite in the BioWare catalog.





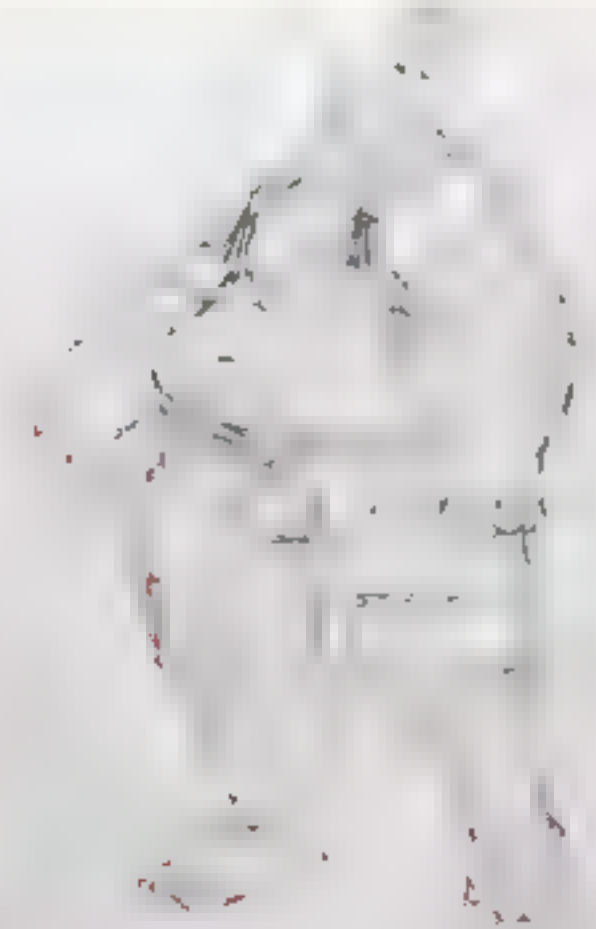


A lot of the early exploration was expanding on ideas that they didn't have room for in *Jade Empire*. The mantis demon pictured here is one example.



The initial plan was for some characters, including followers, to return for the sequel, while also introducing a cast of new friends and enemies for players to get to know.



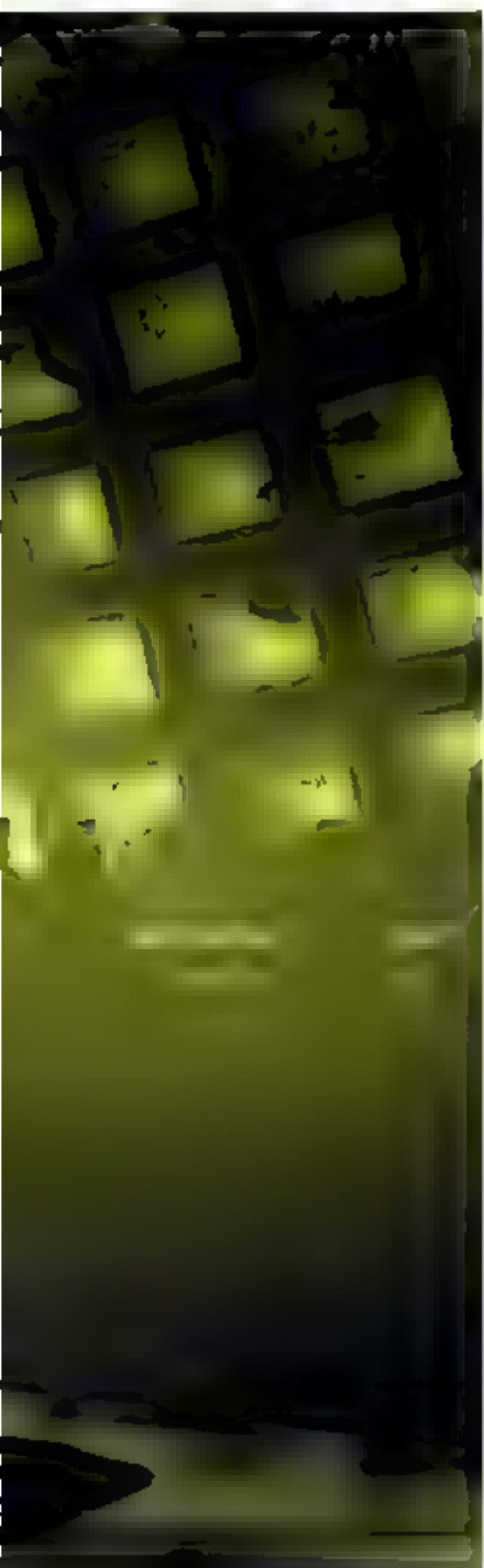


The art team was excited to explore more elements of Jade Empire's unique fantasy world. It allowed them to bring in references and concepts not found in any other BioWare game.











## EVOLVING REVOLVER CONCEPT ART

AS **REVOLVER'S** SETTING changed from ancient Asia to a near-future metropolis, so too did its art style. Some concept art from the shelved project went on to find new homes in other games, notably *Dragon Age* and *Mass Effect*.







Art and story ideas from *Revolver* found new life in BioWare's other projects at the time.

"*Revolver* was definitely reconstituted and pillaged like the whale corpse that it was at the bottom of the ocean," *Revolver* concept artist Matt Rhodes says. "*Mass Effect 2* used a whole bunch of the helmets that we designed for the ISA agents, which were the 'Stormtroopers' of *Revolver*. You can actually see some of them in *Mass 2* and *Mass 3*. The faceplates especially."

Characters and themes from *Revolver* also found their way into *Dragon Age II*. Like *DA II*, *Revolver* took place in a single city. *Revolver*'s was called Meridian. It had a Hightown and a Lowtown. Key *Revolver* characters were spiritual precursors to prominent Kirkwall figures, like Meridian's crime lord Victor Dunn, who had shades of *Dragon Age*'s Samson.

In one draft, *Revolver*'s player character was even named Carver.





## HOW TO WRITE SELECT REVOLVER CHARACTERS

EXCERPTED FROM INTERNAL DESIGN DOCUMENTS

### PLAYER CHARACTER (PC)

*Characteristic dialogue:* The PC treads a line between leader and lone gun—much of his dialogue suggests a lack of subtlety in planning and only basic intelligence (“Reinforcements are just walking ammo. Saves me bringing a backpack.”), but he is willing to listen to his followers and understands that his task requires as much negotiating with blocking characters as it does shooting.

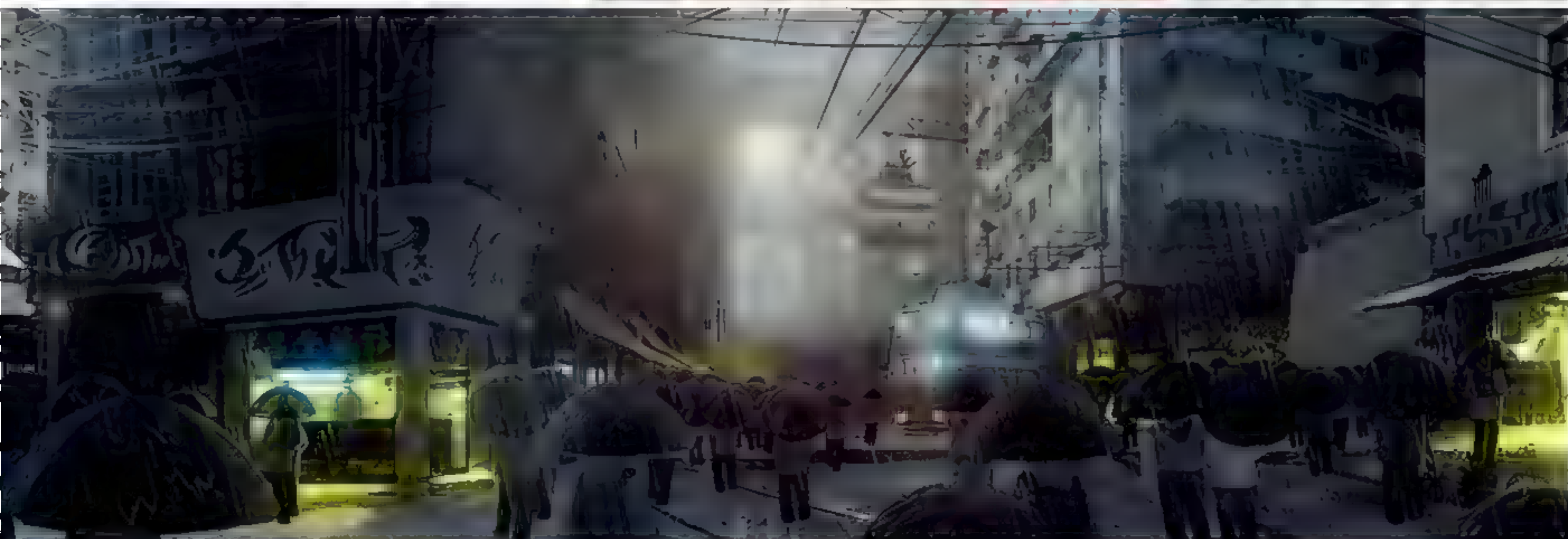
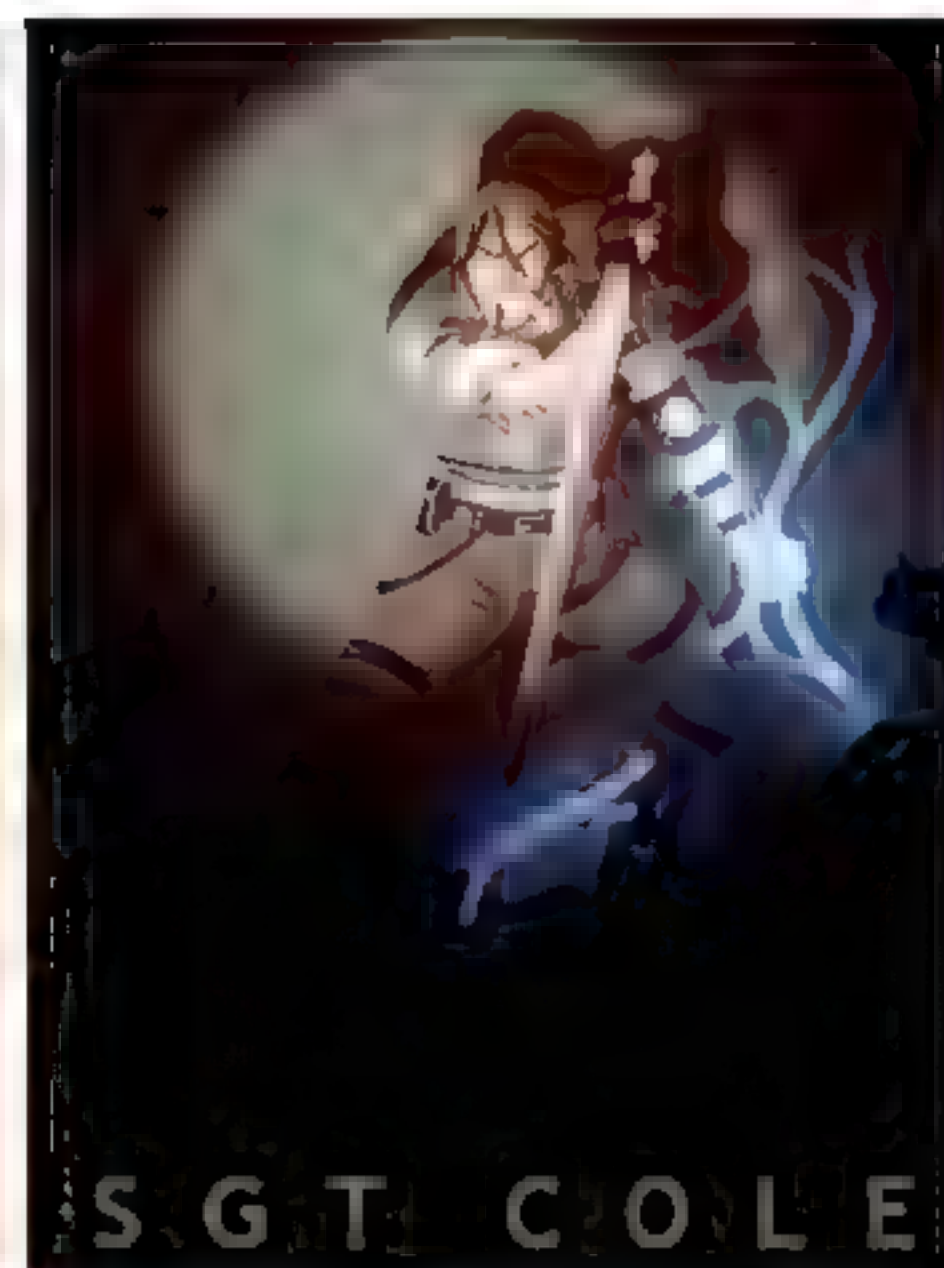
### SHIFT (FOLLOWER)

*Characteristic dialogue:* Shift is a mercenary type who works overly hard on maintaining an aura of mysteriousness and indifference. Whereas Alexandra reserves her sniping at the PC and other followers for safe situations, Shift is sarcastic or blasé even when walking into danger—even when that attitude could distract his allies.

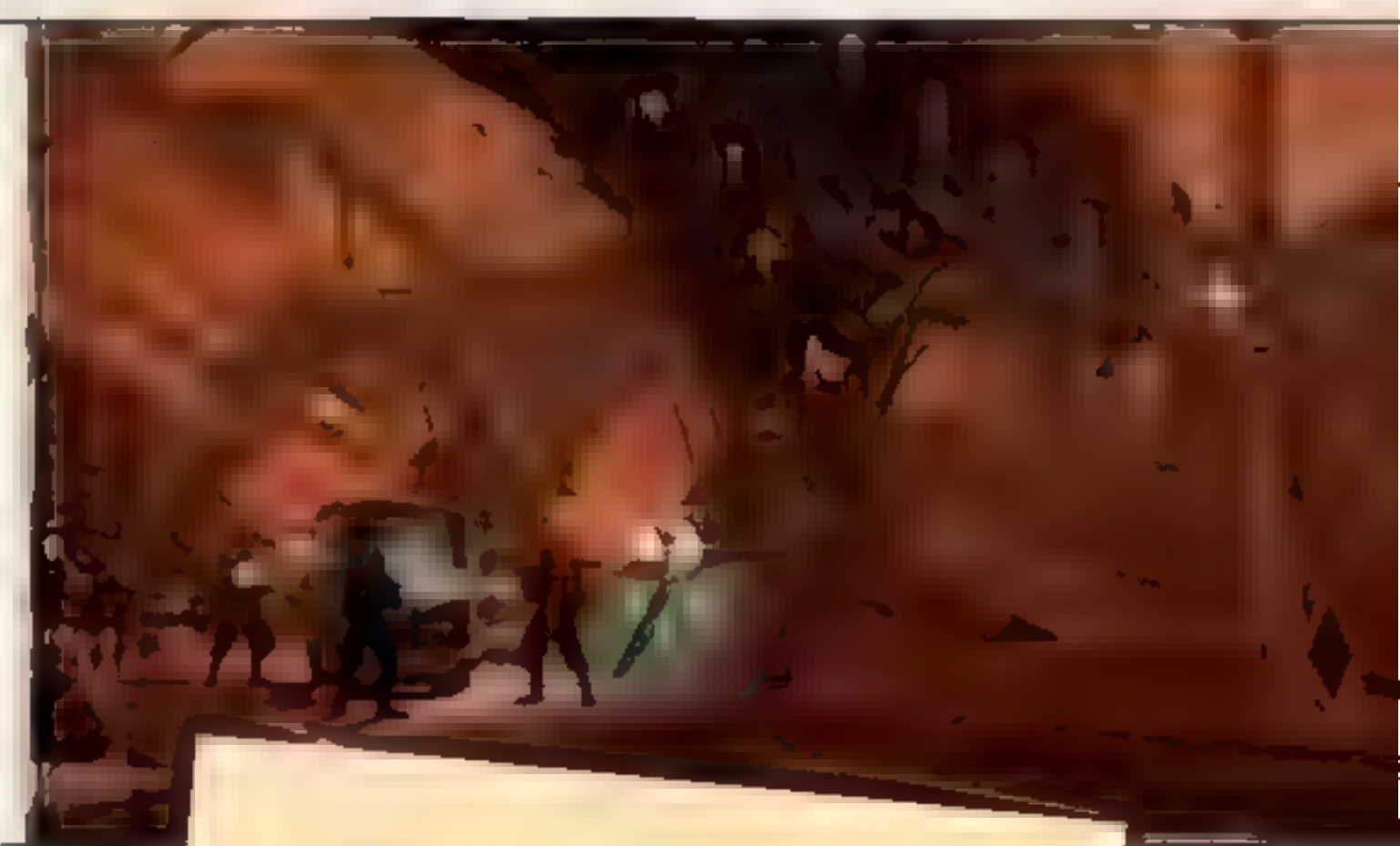
However, when situations begin to involve Shift or his friends, as when the PC suggests assaulting the Disciples, Shift suddenly, um, shifts into busy-body mode and takes the active role he previously shunned; this proves that Shift’s regular persona is an act.

### ALEXANDRA (FOLLOWER)

*Characteristic dialogue:* Alexandra (a reporter) is a verbal chameleon, altering her speech to best ingratiate herself with whomever she’s speaking. To Shift and the PC, she is intelligent and self-promotional, employing false sincerity to mask her boasting (“This part of the city is horribly neglected. I did a whole series on it, but no one listens.”). When she adopts that sincere manner, her dialogue is grammatical and crisp; when she’s just hanging out with the rest of the party, she drops into sentence fragments and contractions.







Take a good, long look at the gritty, ultramodern style of the concept art on this page

Now turn to the martial arts fantasy-inspired characters on page 126.

These are somehow from the same project. *Revolver's* vision changed so much over the course of its development and eventual cancellation that they look like entirely different games.



## DEVELOPER NOTES: REVOLVER OVERVIEW

**DESIGN DOCUMENTS PENNED** toward the end of *Revolver*'s development concentrated the game's vision into a few paragraphs. Here is the direction a game that was once *Jade Empire 2* was heading when it was shelved in 2008:

*The leaders of the conspiracy fear only one thing: the coming of a Phoenix. As the storm of the century closes in on the city of Meridian, a man named Cole awakens to his abilities, and the armies of the conspiracy mobilize to destroy him. Slicing through an ancient web of secrets and lies, Cole discovers that the city he's always called home is something else: a machine built to end the age of heroes.*

*You are the patron saint of violence, using a distinct sword and gun to rip through anything that stands in your way, while modern city of Meridian reacts to you with fear, awe, hatred, and reverence.*

- **Action:** Step into the boots of the patron saint of violence.
- **Story:** Fewer non-interactive cutscenes, shorter dialog, more endings to the story, and a city that reacts to your actions.
- **Choices:** A game that the player can make his own.

*Revolver lives in the genre of pulp realism, defined by conflict between a hero and a villain who are both more than human. It is the genre of popular action. The *Revolver* tone is urgent, masculine, and serious. *Revolver* is never silly or mystical, and never breaks the fourth wall.*

- *Revolver is aiming for mature subject matter about on par with a ten o'clock network-TV drama.*
- *Action tells the story in *Revolver*.*
- *Revolver is a multi-path game set in a modern city, not an open-world game.*
- *Tempest-sensitives (the awakened) can alter probability to achieve seemingly impossible feats—this is not magic, just very, very unlikely events coming to pass.*



TEMPEST ENERGY MECHANIC  
9/30/2008

OWNER: COREY CASPER  
DISTRIBUTION: REVOLVER DESIGN

CONFIDENTIAL  
REVOLVER

### Overview

The tempest energy/rage mechanic encourages fast-paced combat, instead of the player hiding or running away.

The GUI displays a tempest meter that represents energy flowing through Cole. The meter is fed through intense combat. The tempest meter controls the rage mechanic, described below, as well as Cole's rate of health regeneration.

### How Cole Gains Tempest Energy

Cole gains tempest energy through exploration moves and combat maneuvers. This encourages the player to stay active. The amount of energy that Cole gains for each action varies: a first-strike attack generates considerably more energy than a standard sword attack or wall jump.

#### Standard Combat Moves

- Standard sword strike: Cole receives a small tempest-energy boost.
- Evade or counterattack: Cole receives a medium tempest-energy boost.
- Gun link or launch: Cole receives a medium to large tempest-energy boost.

#### Special Moves

- Enemy fatality: Cole receives a medium tempest-energy boost.
- First strike: Cole receives a large to maximum tempest-energy boost.
- Tempest-based attacks: Cole expends tempest energy to perform tempest-based attacks; however, certain tempest moves could boost the tempest-energy meter more than they deplete it, for a net gain of energy.

#### Follower Actions

- Followers do not have tempest energy bars. They are limited by a cooldown requirement after performing tempest-based attacks, leaving them vulnerable for a period. Follower super-attacks tap into Cole's tempest energy bar and can only be performed while Cole is in rage mode.
- Follower super-attacks are the followers' strongest attacks, and are channeled through Cole (essentially tag-team moves). These are not synchronized animations; individual super-moves are yet to be determined.

#### Enemy Deaths

- Killing enemies grants Cole a small to medium tempest-energy boost.

TEMPEST ENERGY MECHANIC  
9/30/2008

OWNER: COREY CASPER  
DISTRIBUTION: REVOLVER DESIGN

CONFIDENTIAL  
REVOLVER

### Overdrawn State

Cole enters this state when he has expended all tempest energy (typically spending more energy for an attack than he had available); it is similar to when Master Chief's shields are broken in *Halo*.

- Occurs when the tempest meter reaches zero.
- Penalizes Cole with no health regeneration, but returns to normal after X seconds.

### Normal State

Normal state is where Cole will generally find himself when not in combat.

- Cole's health regenerates slowly.

### Strong State

Cole will usually find himself in this state during lengthy combat rounds.

- Cole's health regenerates at medium speed.

### Maximum State

Cole's damage-per-second must cross a given threshold to reach the maximum state.

- Cole's health regenerates at maximum speed.
- Cole's rage state/super follower move becomes available.

### Rage Mechanic

When Cole reaches the maximum state on the tempest bar, he enters rage mode. Phoenix-class awakened channel energy from the tempest through destruction and violence; this energy accumulates in their bodies and drives their internal health-regeneration abilities until they release it for explosive energy attacks.

### Rage-Mode Benefits

Rage mode increases Cole's health-regeneration rate to the maximum. This state can also include any number of additional effects found in our reference games (devil mode in *Devil May Cry 4*, magic attacks in *God of War*).

#### Default Attributes

- Cole's health regenerates at maximum speed.

#### Potential Upgrades

- Quicker melee attacks
- More damage
- No stagger/no knockback



## BIOWARE TEAM SHIRTS

IT'S CUSTOMARY FOR game studios to have team shirts made, and BioWare is no exception. Some shirts are game specific and may even celebrate or hint at projects that have yet to be announced. Notable examples of these over the years have included shirts for *Anthem* when it was still known by its code name, Dylan, and a cryptic shirt teasing the canceled *Dragon Age II* DLC *Exalted March*, which developers wore to PAX 2011. It read like a game of hangman: \_\_\_\_\_ D \_ \_ R \_ \_ , with the letters N, O, Y, and P crossed out as incorrect.

Other shirts are wild studio-branded pieces. Most notable among these is the infamous BioWare bowling shirt, given out to developers when BioWare was still on Whyte Ave.



### BUG REPORT: GENERAL SAMANTHA WARDENLY SPEAKING

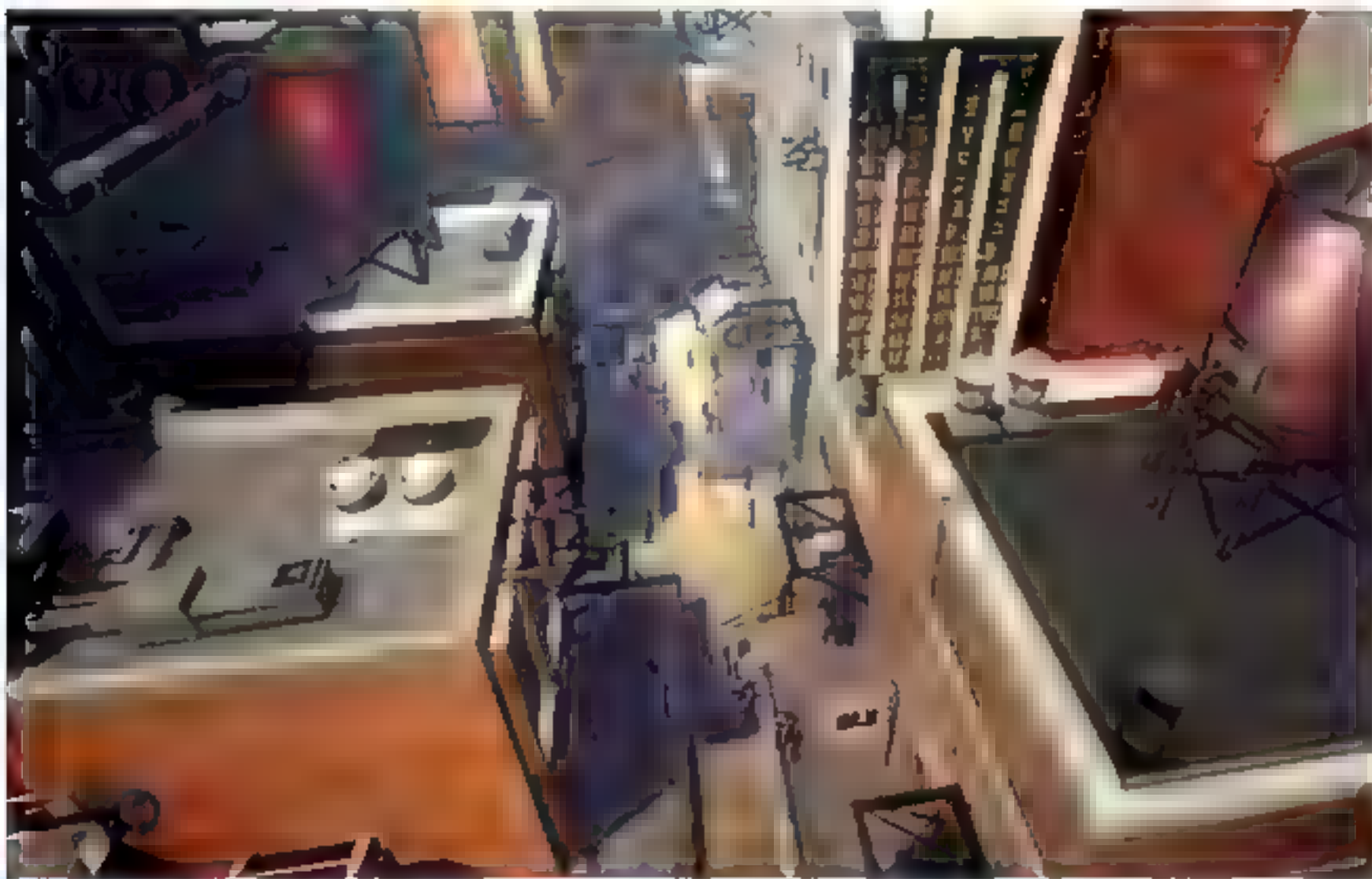
**Release:** *Revolver*  
**Priority:** 1 (Severe)

**Description:** Someone has used global find and replace to change the character previously known as the General to her new name: General Samantha Warden. This has caused numerous problems in documentation text, as it replaced not just the rank but every instance of the word "general."



"Dan Lazin, who was an editor new to BioWare at the time, did a global search to replace 'General' with 'General Samantha Warden,'" which meant that the General Design Doc became the General Samantha Warden Design Doc," *Revolver* writer Patrick Weekes says. "General Samantha Wardenly speaking, there were a few problems."









"REVOLVER IS THE ONE THAT GOT AWAY. IT WAS A LOT OF FREEDOM AND WE MADE WEIRD EARLY CHOICES. LIKE RADIO SPOTS WITH JADE-THEMED MONSTER TRUCKS. 'THIS SUNDAY SUNDAY, SEE THE EMPIRE OF THUNDER! KIDS, GET YOUR PICTURE ON THE PRIDE OF THE CIRCUIT, THE MARVELOUS DRAGONFLY, THEN SCREAM IN TERROR AS IT TAKES ON ARCHRIVAL BRAWN STAR IN AIRBORNE ROLLOVER MAYHEM MAYHEM!' WE STEPPED A LITTLE BACK FROM THAT—YOU KNOW, WISELY—AND IT WAS LOOKING GOOD. AND THEN IT WAS NOTHING."


—REVOLVER WRITER LUKE KRISTJANSON





## THE MAKING OF

# MASS EFFECT™



### BIOWARE TAKES PLAYERS TO A GALAXY NOT SO FAR, FAR AWAY



#### KEY FACTS MASS EFFECT

**RELEASE DATE:**

November 20, 2007

**GENRE:**

Action RPG

**PLATFORMS:**

Xbox 360, Windows,  
PlayStation 3

**EXPANSION CONTENT:**

*Bring Down the Sky,*  
*Pinnacle Station*

Developed in Edmonton  
Published by Microsoft Game  
Studios (initial release),  
Electronic Arts

**MASS EFFECT BEGAN ITS LIFE** in a vision document in the fall of 2003, shortly after BioWare released *Star Wars: Knights of the Old Republic*. The project, code-named SFX, was conceived by Casey Hudson and a core team from *KOTOR*. The idea was to create an epic science-fiction RPG in an original setting wholly owned by BioWare. With the exception of *Shattered Steel* and *Jade Empire*, every BioWare game up to that point had been licensed.

Casey wanted *Mass Effect* to capture that similar feel of exploring space and far-flung planets with memorable squad mates while tackling heady sci-fi concepts, but in a setting BioWare owned that was conceived to work first and foremost as a video game.

"If we wanted to do a certain kind of toy or, you know, a novel or whatever, then that would be within our control," project director Casey Hudson says.

"That was really the genesis of *Mass Effect*: let's have that same kind of fun that we had on *KOTOR*, but build a universe for us to do it in."

#### THE EVOLUTION OF MASS EFFECT'S DESIGN

From the very start, the core of the *Mass Effect* experience was there, albeit at a sky-high level. SFX would offer a "powerful, character-driven story" in which players would "lead a small party of two or three, selected from a larger group of adventurers." Initially, players could control any party member; that later changed to players maintaining control of a single, customizable Spectre and issuing commands to a pair of AI squad mates.

"We wanted it to be about Shepard and you to be focused on Shepard being a battlefield commander, as opposed to switching bodies," lead designer Preston Watamaniuk says.

By the start of 2004, SFX's backstory began to take shape. In the initial draft, humans landed on Mars in 2250 and discovered evidence of an ancient alien race, as well as a powerful substance called Black Sand, which rapidly advanced technology to the point where faster-than-light travel was made possible.

Humans, suddenly capable of travel to multiple star systems, made contact with a multitude of alien species. At the start of the first game, these species, together with humans, maintained a fragile peace, with focus placed on the political center of the galaxy, a hub known as Star City, later renamed the Citadel.

#### MASS EFFECT MULTIPLAYER

Multiplayer functionality was a vision for the series all the way back in 2003. The plan was for the first *Mass Effect*, an Xbox exclusive at launch, to take advantage of the platform's online components. Early designs saw players meeting in game at central hubs to interact and trade items collected in their otherwise single-player adventures.

By 2006, SFX had a name—*Mass Effect*—and a more specific story about conflict between organic and artificial life forms. The story's scope stretched across three games and included the option for full co-op multiplayer.

"Every single game, we tried to do multiplayer. It was something we discussed right from the get-go," *Mass Effect* writer Mac Walters says. "It always just fell by the wayside, like it was a bridge too far at the time, when you're trying to build something that's a new IP, on a new platform, with a new engine. With all those things, you've got to really focus on the core elements of the game."







While the original *Mass Effect* shipped as a single-player-only experience, multiplayer was eventually added in the series' third installment as a separate mode of play.

#### MASS EFFECT'S CONVERSATION

##### PROTOTYPE WAS MADE IN JADE EMPIRE

At the core of *Mass Effect* was its story and characters—and the complexities with which players could engage with them.

Some of the series' earliest writing was actually done in a development build of *Jade Empire*. At first, there was no conversation wheel. Proto-Paragon and Renegade options existed as Friendly and Hostile, respectively. Commander Shepard was an unnamed human Spectre, portrayed silently by *Jade Empire* player character Wu the Lotus Blossom.

Players could converse with a handful of characters in *Mass Effect*'s prototype. Many conversations tied into the player's choice about smuggling a weapon through Noveria Station—a mission that made it into the actual game. In the prototype, too, a merchant gave the player this quest, referring to themselves as "this one," though the word "hanar" never appeared.

The prototype also hinted at numerous pieces of now-established *Mass Effect* lore, including the player's ship, called the *Normandy*, the krogan, and memorable characters like Saren and Harkin, the latter a corrupt security officer voiced in the prototype by an actor who sounds suspiciously like Mark Meer.

In one prototype conversation, the player was even given the opportunity to end a conversation with the signature line "I should go."

This one has procured a special item for a valued customer. The item is... ah... not permitted within the Noveria station. Spectres, however, are not searched at customs.



CONTINUE: SMUGGLING?  
 Agree: This was worth it!  
 Disagree: I can't break the law!

Luckily for you, the Oculon Syndicate's always looking for friends with your qualifications.



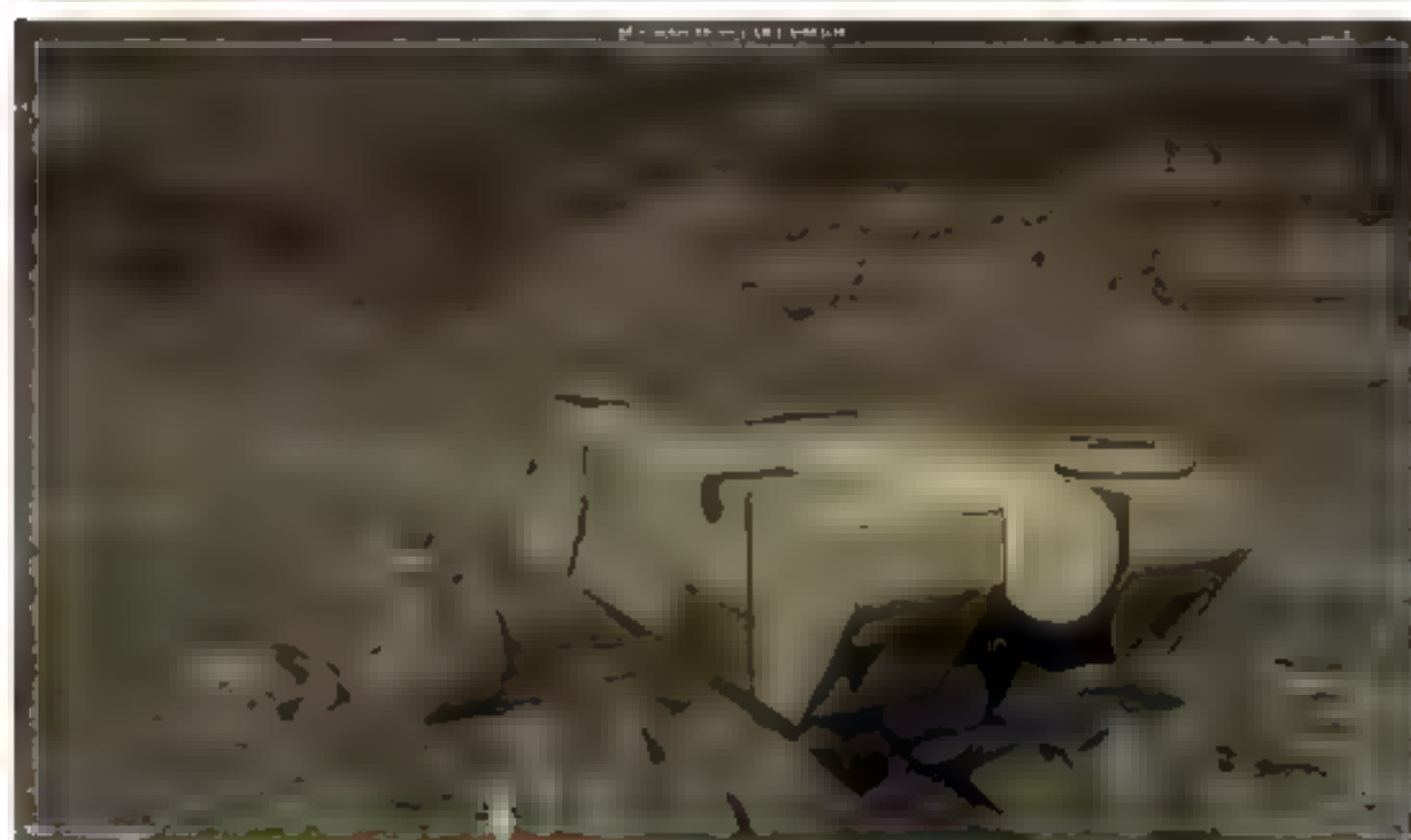
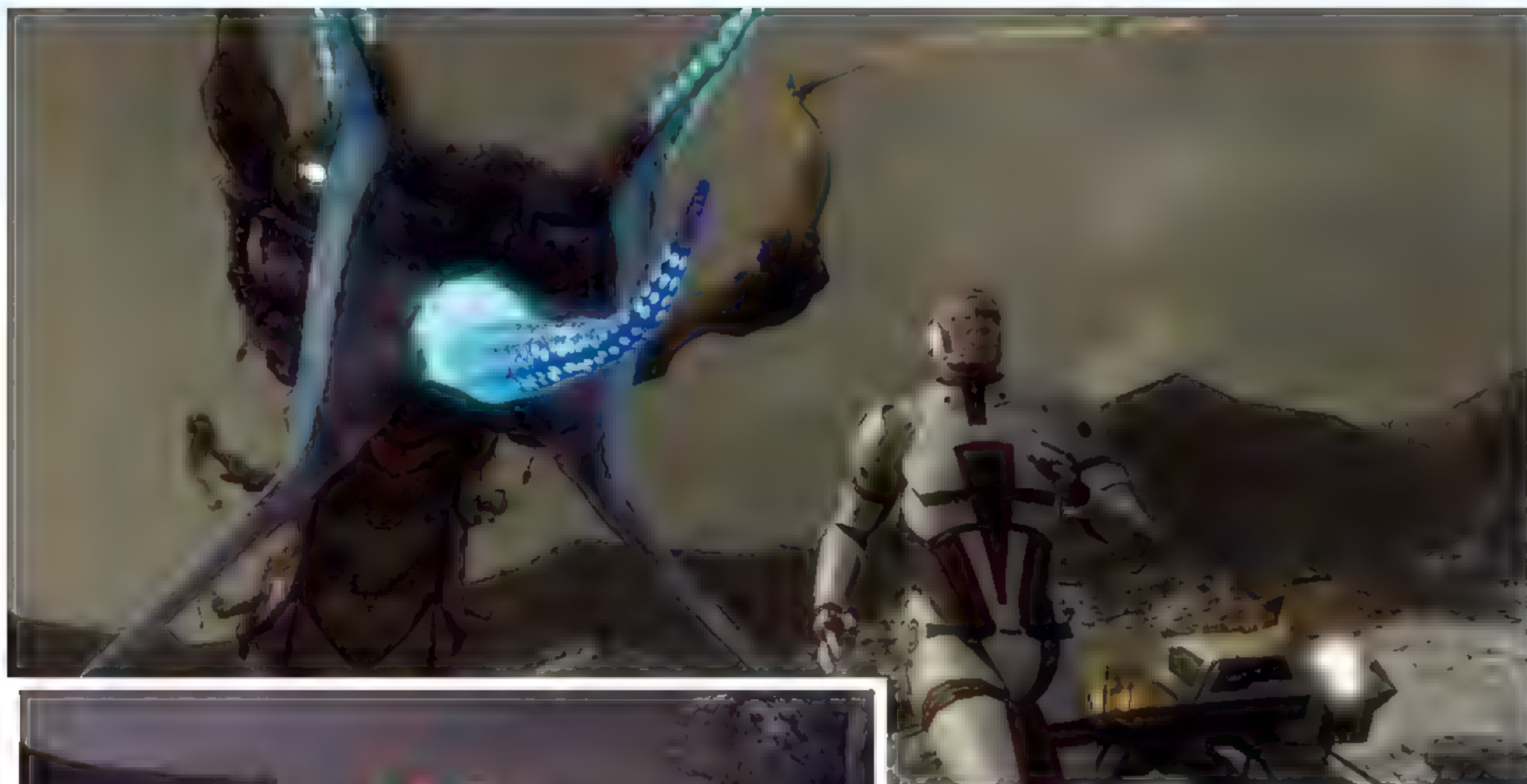
INVESTIGATE: INVESTIGATE...! SYNDICATE INFO  
 TELL ME MORE ABOUT THE SYNDICATE  
 INVESTIGATE: INVESTIGATE...! YOU'RE WITH THE SYNDICATE?

What's on your mind, kid?



CONTINUE: GOODBYE  
 I SHOULD GO.





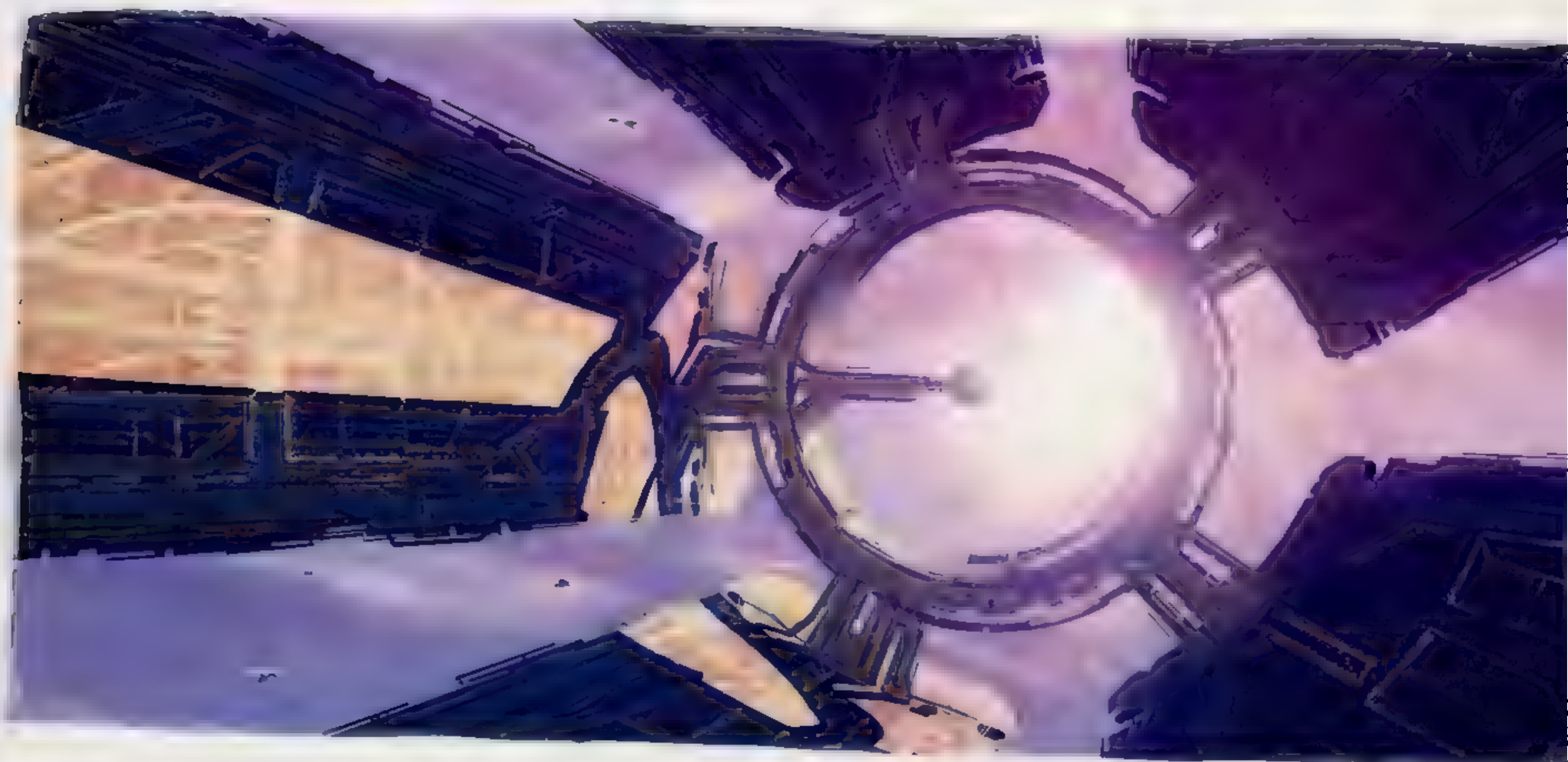
Tues. Stearnshots from many  
Mo., Eff. Tue. Tues. Thurs.  
at the tip of the river,  
the water was very low  
of the playerch at the Shepard In-  
outlet was enormous, the boat  
ing, the ground was sandy  
cent to many people.

Make the ground as flat as possible  
wherever they can get the ground  
flat at the time

We interviewed the vehicle's designer, a truck in Mexico City in 2007, at the factory. Casey H. Chen says, "The P-ways are pretty fucking different from conceptual, where you can be very slow and just like they do in the first game."

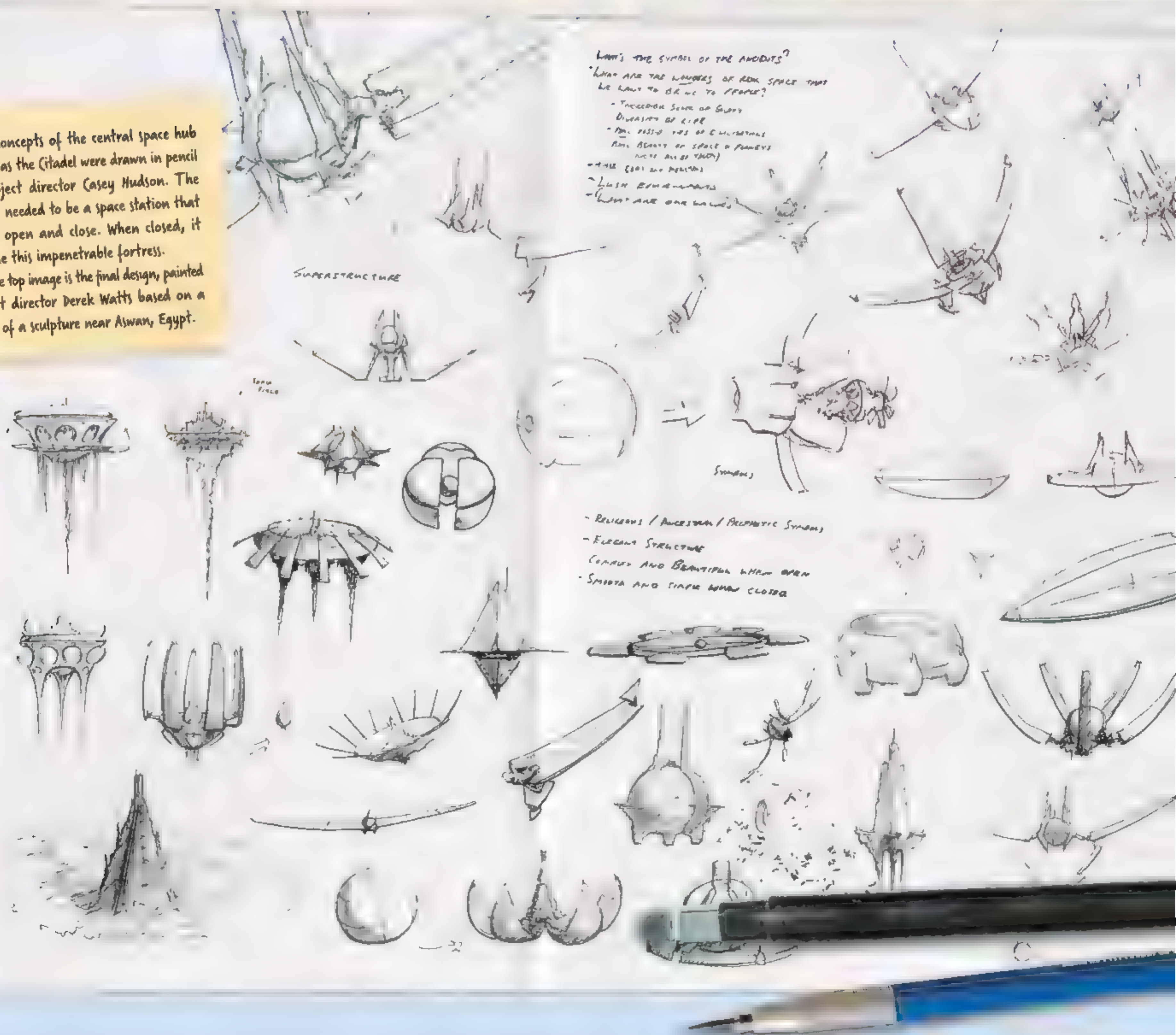






Early concepts of the central space hub known as the Citadel were drawn in pencil by project director Casey Hudson. The Citadel needed to be a space station that would open and close. When closed, it became this impenetrable fortress.

The top image is the final design, painted by art director Derek Watts based on a photo of a sculpture near Aswan, Egypt.







### REAL TALES OF DEVELOPMENT: NAMING A SPRAWLING SPACE OPERA

AS WITH ANY NEW IP, naming the game that would ultimately be *Mass Effect* was a struggle. The team did a number of different exercises, attempting to find just the right feel. They put out a call to all studio staff for ideas. They did polls. They made a name generator that combined words that they liked in random ways.

"When we found one that seemed pretty good, I would make a pretend logo for it in Photoshop, to see if I could make myself love the name, or find some visual potential in it," project director Casey Hudson says. "An example was *Unearthed*. I liked the idea that it referred to something being dug up (Prothean ruins on Mars) and also our ascendance to the stars (going away from the Earth). And in fiddling with a logo idea I could see a way to pop EARTH out with a planetary arc, leaving two letters symmetrically on either side."

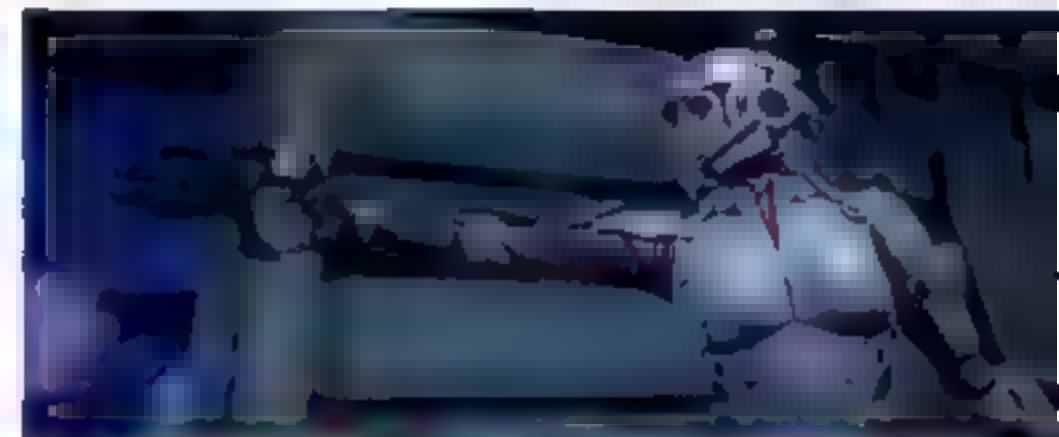
A number of other names were floated, including *BioWar* and *The Epsilon Effect*. Casey says,

*We knew that the game would have a central space station that would figure prominently in the setting, so some of the ideas were about basing the name on that—The Citadel, The Optigon, The Oculon . . . And we had a rare substance that would yield special powers, so "Element" was another word we tried.*

*I was a big fan of John Harris's book *Mass*, which had epic-scaled sci-fi ideas, so that was a word that came up often. Many of the names came from the idea that the IP featured a fifth fundamental physical force (in addition to the known four of gravitational, electromagnetic, strong nuclear, and weak nuclear), so the word "Effect" came up often.*

*Ultimately none of the name ideas really felt right. One Monday morning we were going over the names and Greg Zeschuk said he had an idea on the weekend: "Mass Effect!" I said, "I don't hate it," which in the naming process is a high compliment. And it stuck!*









## A PROTHEAN EXPERIMENT IN CASEY HUDSON'S BASEMENT

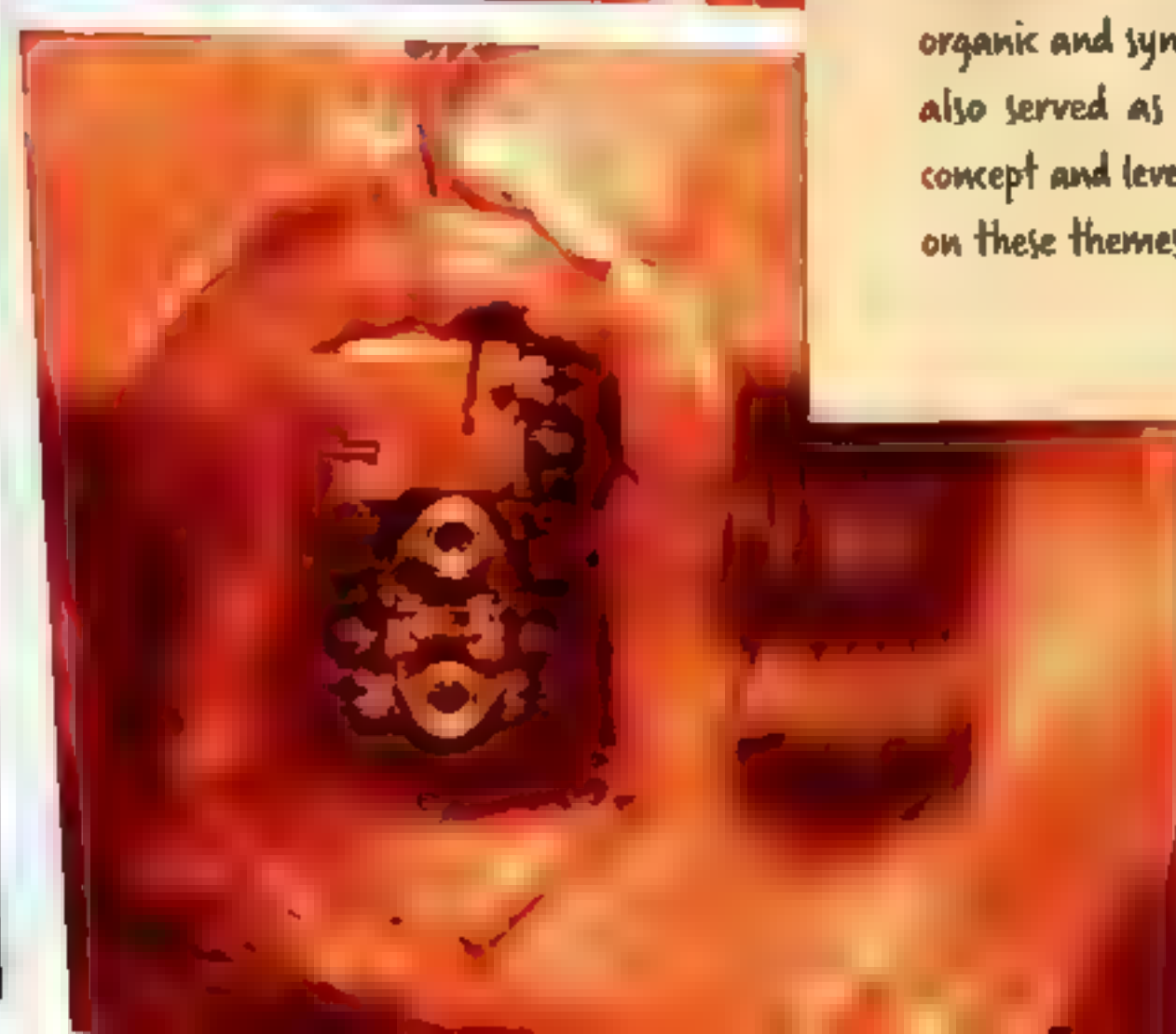
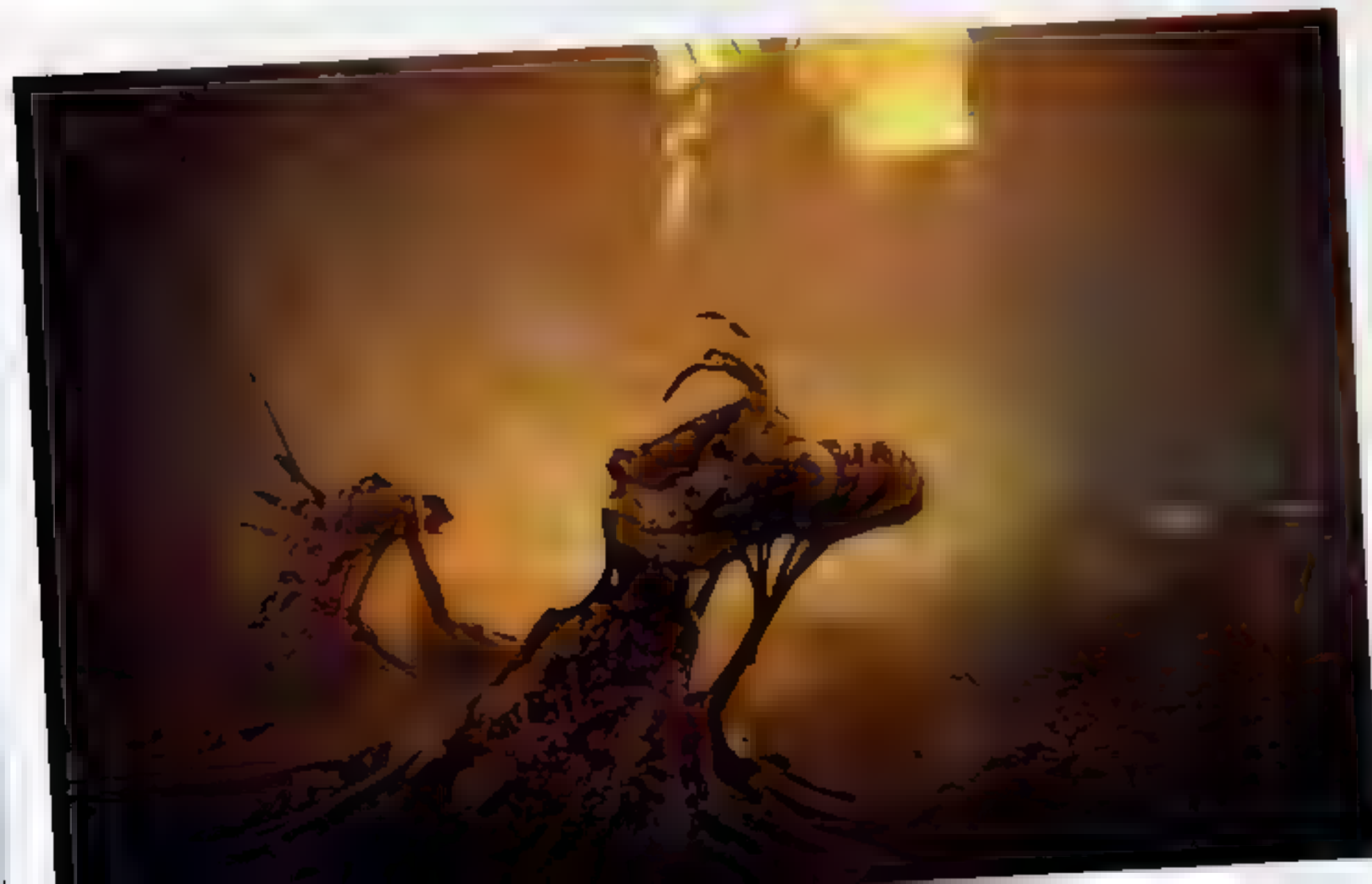
THERE'S A SCENE early in *Mass Effect* where Shepard is given a vision of warning from the ancient Protheans about the Reapers. It was meant for a Prothean mind, so Shepard only sees flashes and images, but the vision depicts the horrible things the Reapers did to Protheans: indoctrination, cybernetic implants . . .

"It was hard to imagine how we would do this, and CG was—and is—really expensive," project director Casey Hudson says. "Instead, I wanted to try doing it through photography and video editing. I went to a local grocery store and bought a few packages of the weirdest-looking meat I could find. I then set up a little photo shoot in my basement, combining the meat with some electronics parts—and some red wine for juiciness."

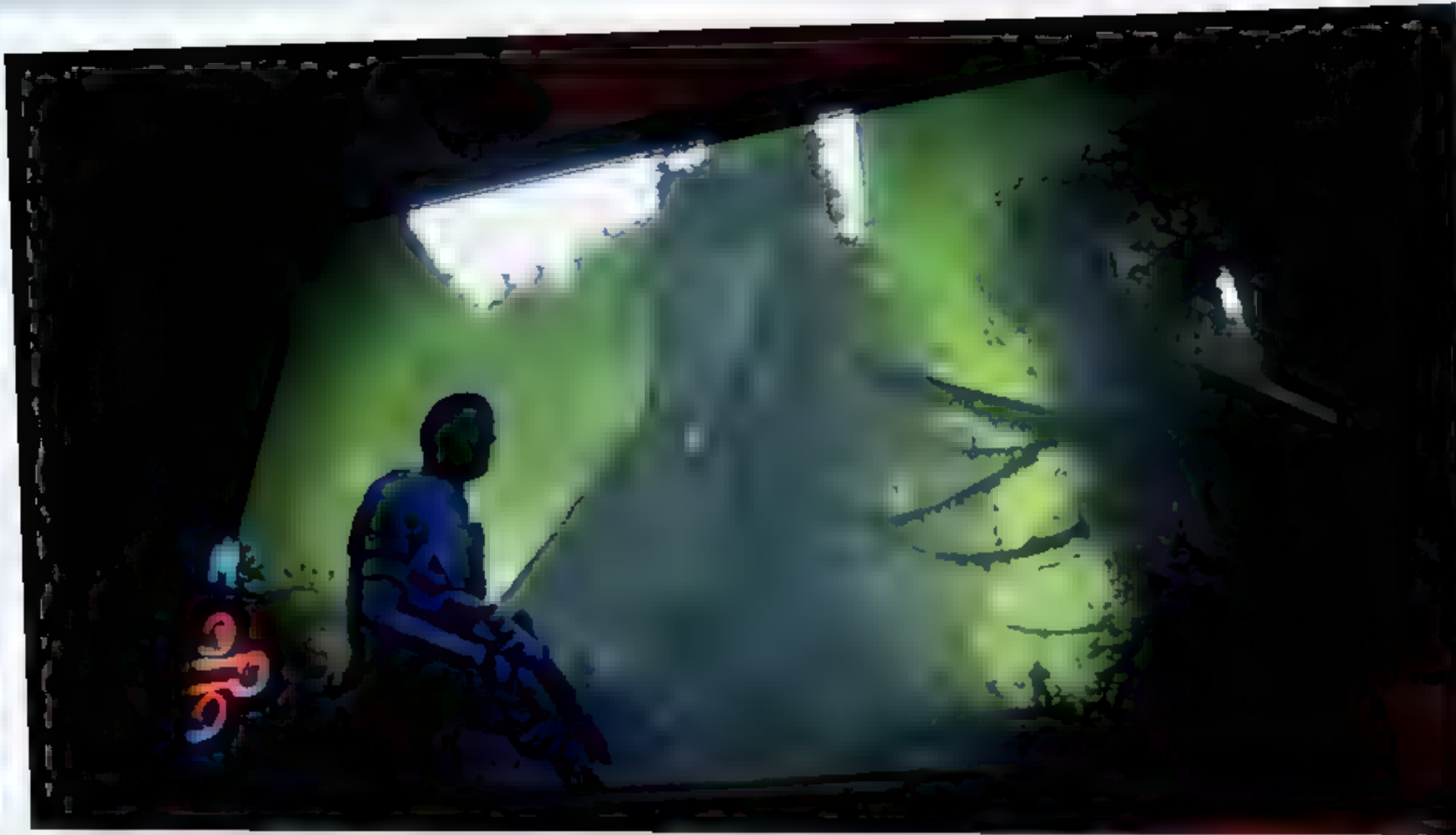
Casey used these props to create a video sequence where the photos were rapidly cycled and blurred, along with production paintings, to create a scary vision of an organic/machine experiment on the Protheans.



These live-action mash-ups of organic and synthetic materials also served as inspiration for concept and level artists working on these themes in *Mass Effect*.

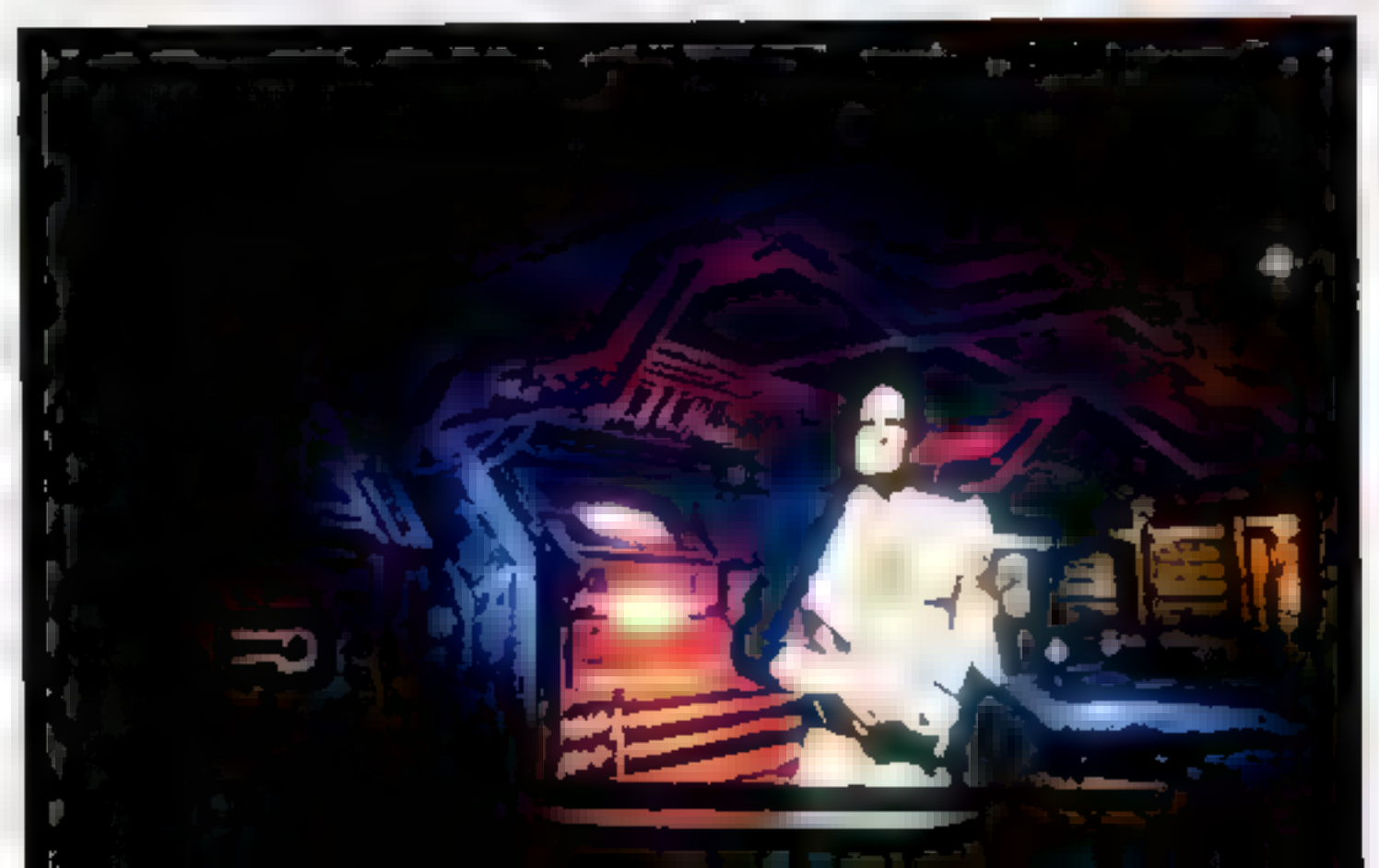
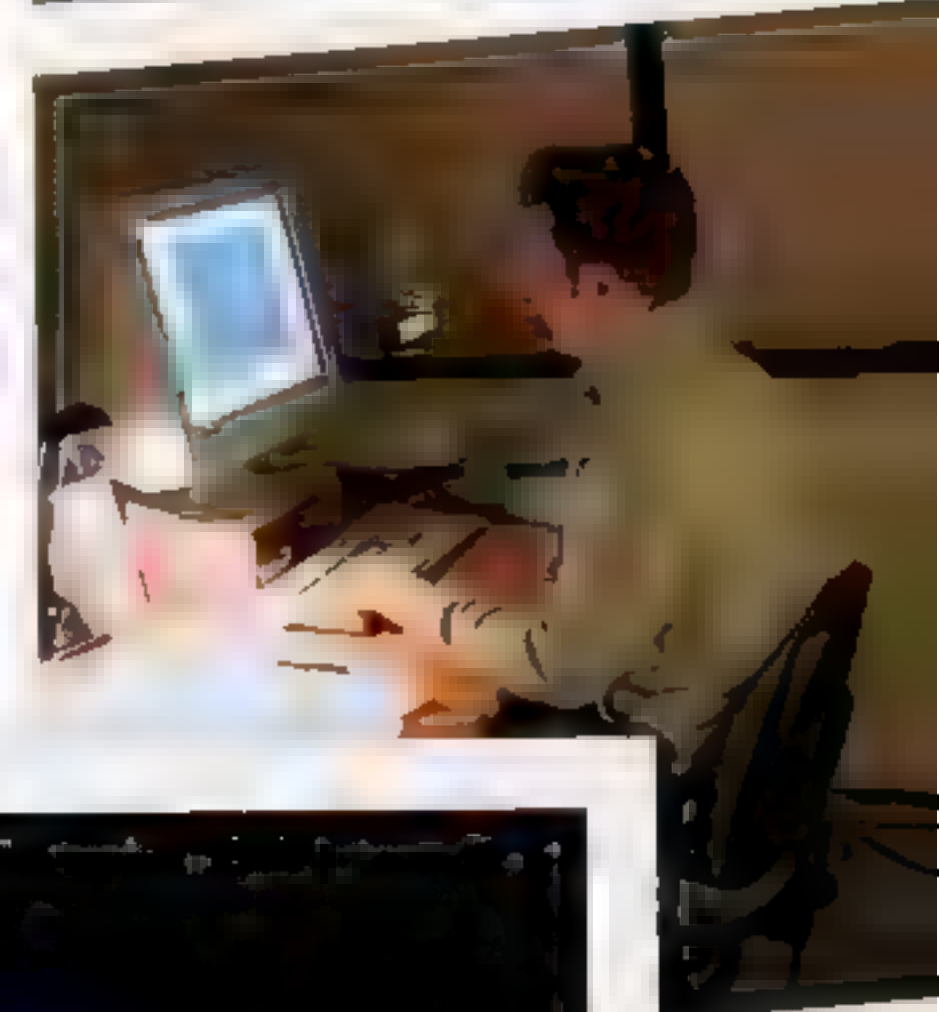
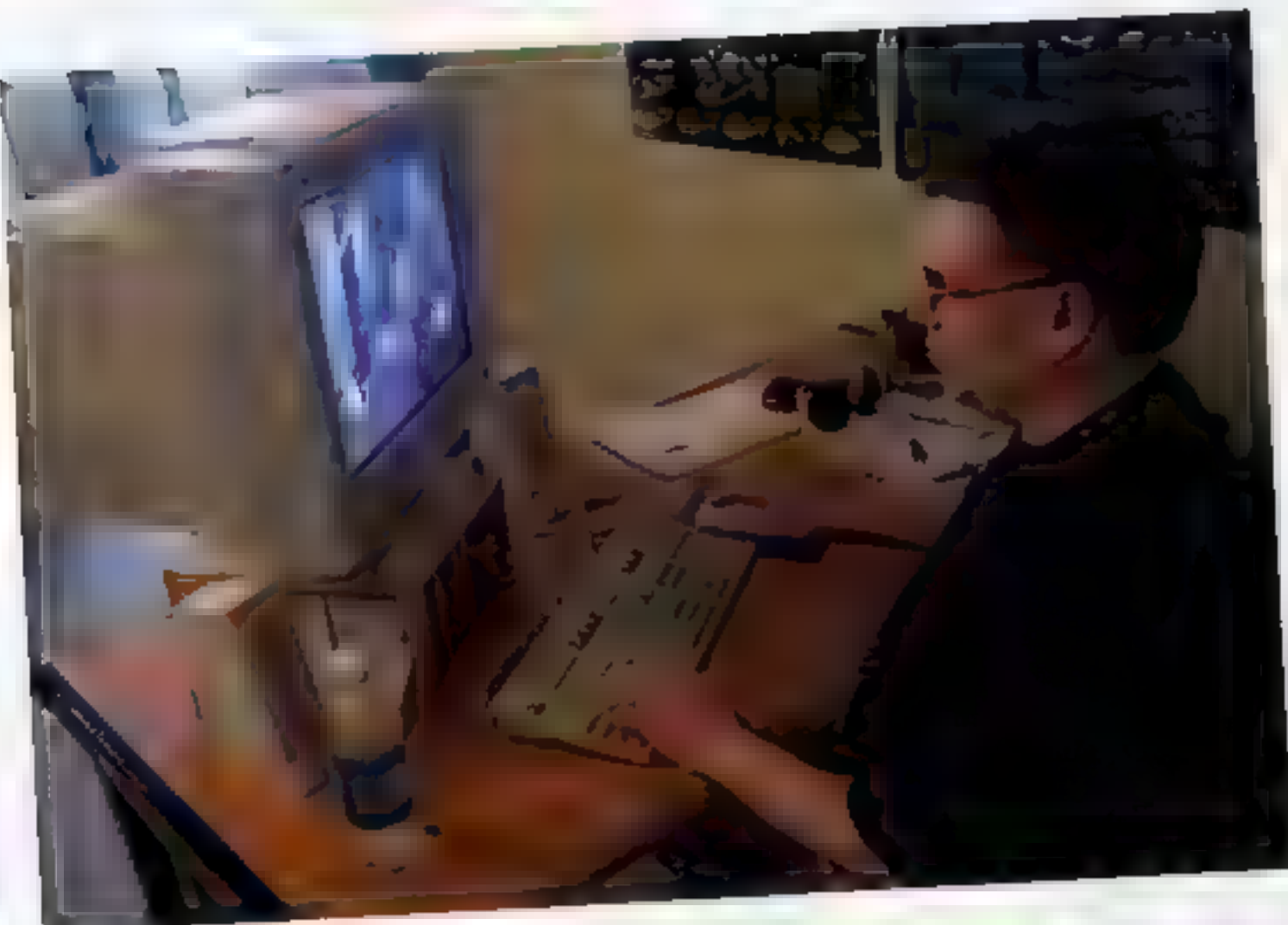
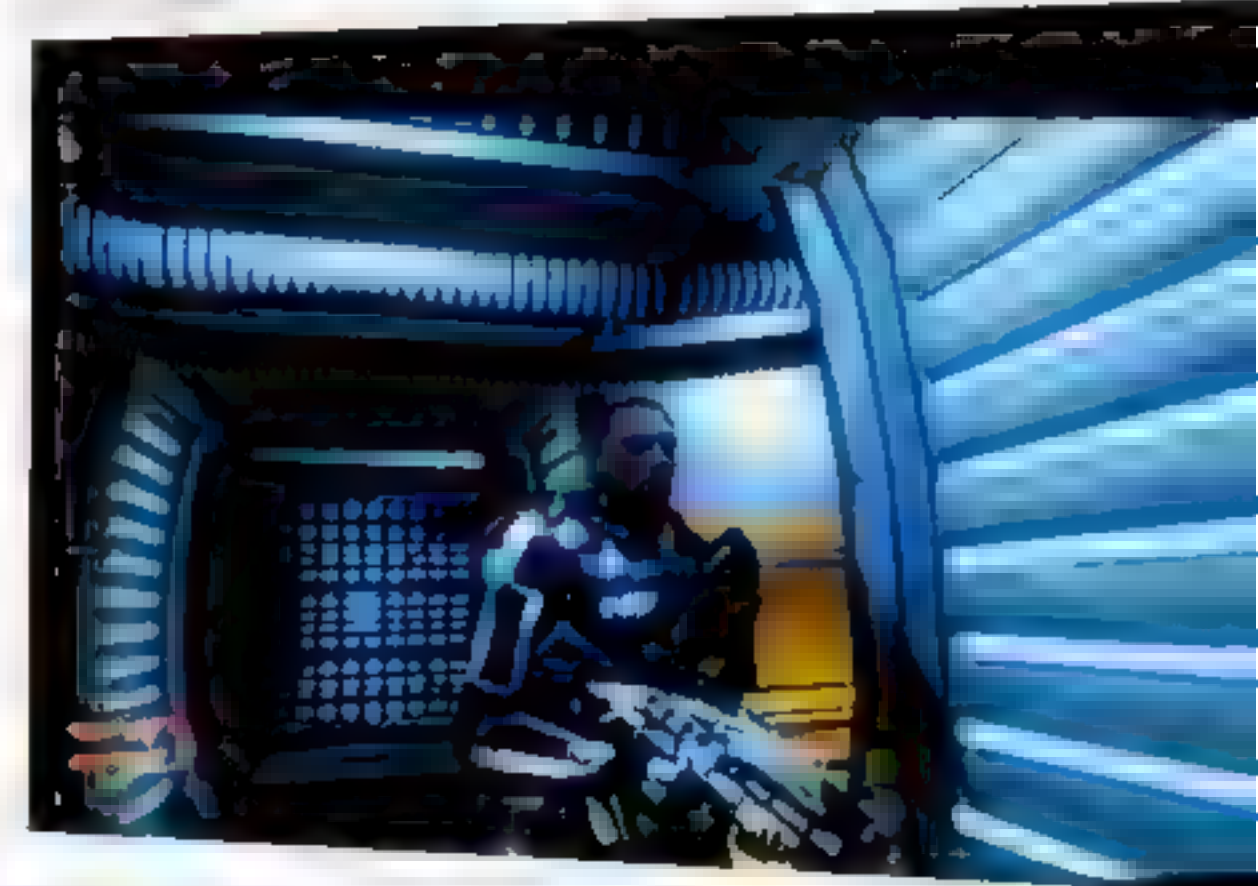






*Mass Effect* was developed and released some ten years after BioWare's first game, *Shattered Steel*—and it showed. While the growing Edmonton studio retained its humble roots (see the lack of fancy offices in these developer photos), the team was evolving to combine homegrown talent with more and more industry vets eager to push the studio to new limits.

"We had a lot of fun," *Mass Effect* lead animator Jonathan Cooper says, who moved to Edmonton from Dundee, Scotland, to work on the series. "It was definitely the best decision of my life just to come over there and be fortunate enough to contribute to something like *Mass Effect*."







## THE IMPORTANCE OF N7

THE ICONIC RANK HAS ITS ORIGINS ON THE SKI HILL

IN THE WORLD OF *MASS EFFECT*, N7 is an elite designation in the Systems Alliance military awarded for the highest level of skill in training and field ops.

In the real world, it represents a camaraderie among fans of the *Mass Effect* series, and often, BioWare games in general.

The logo is subtle enough that players can wear it on their clothes, and only those who recognize it know that it's connected to a video game at all.

"A badass or a boy scout, everyone is a part of that N7 club," business development director Chris Bain says, adding that the N7 logo has become so popular as a brand that "on the licensing side, we often joke that we're licensing N7, not *Mass Effect*."

The origins of the N7 didn't come from weeks of brainstorming or some wild tale. Series art director Derek Watts got the idea from a beloved set of N77 bindings he used when skiing.

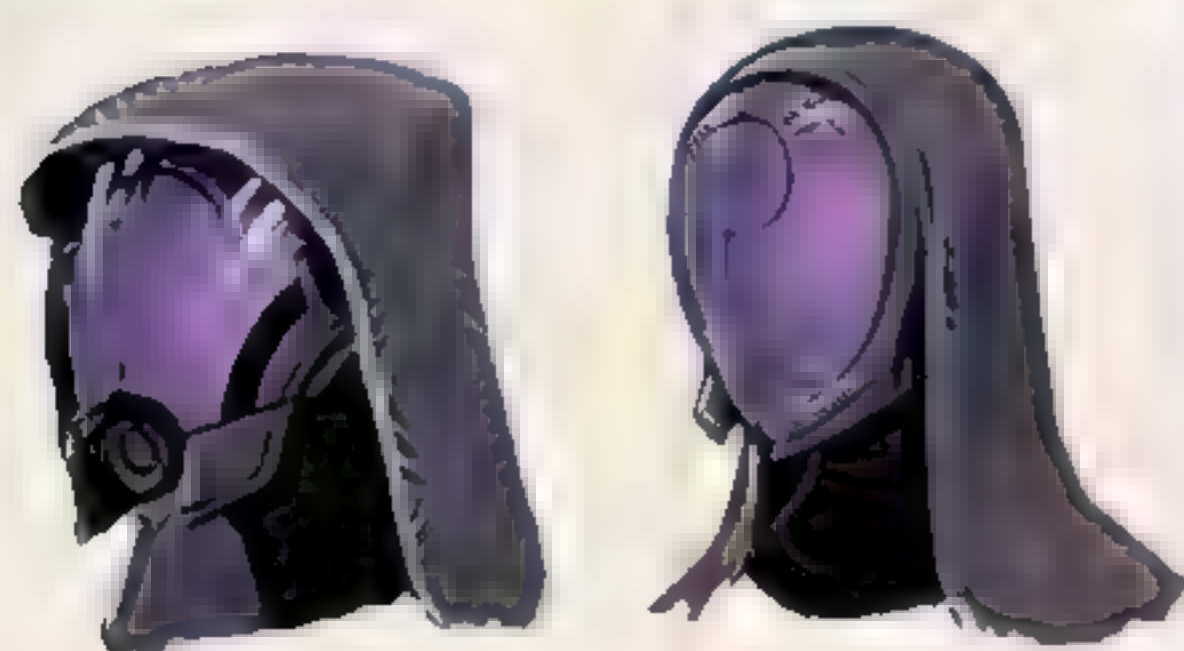
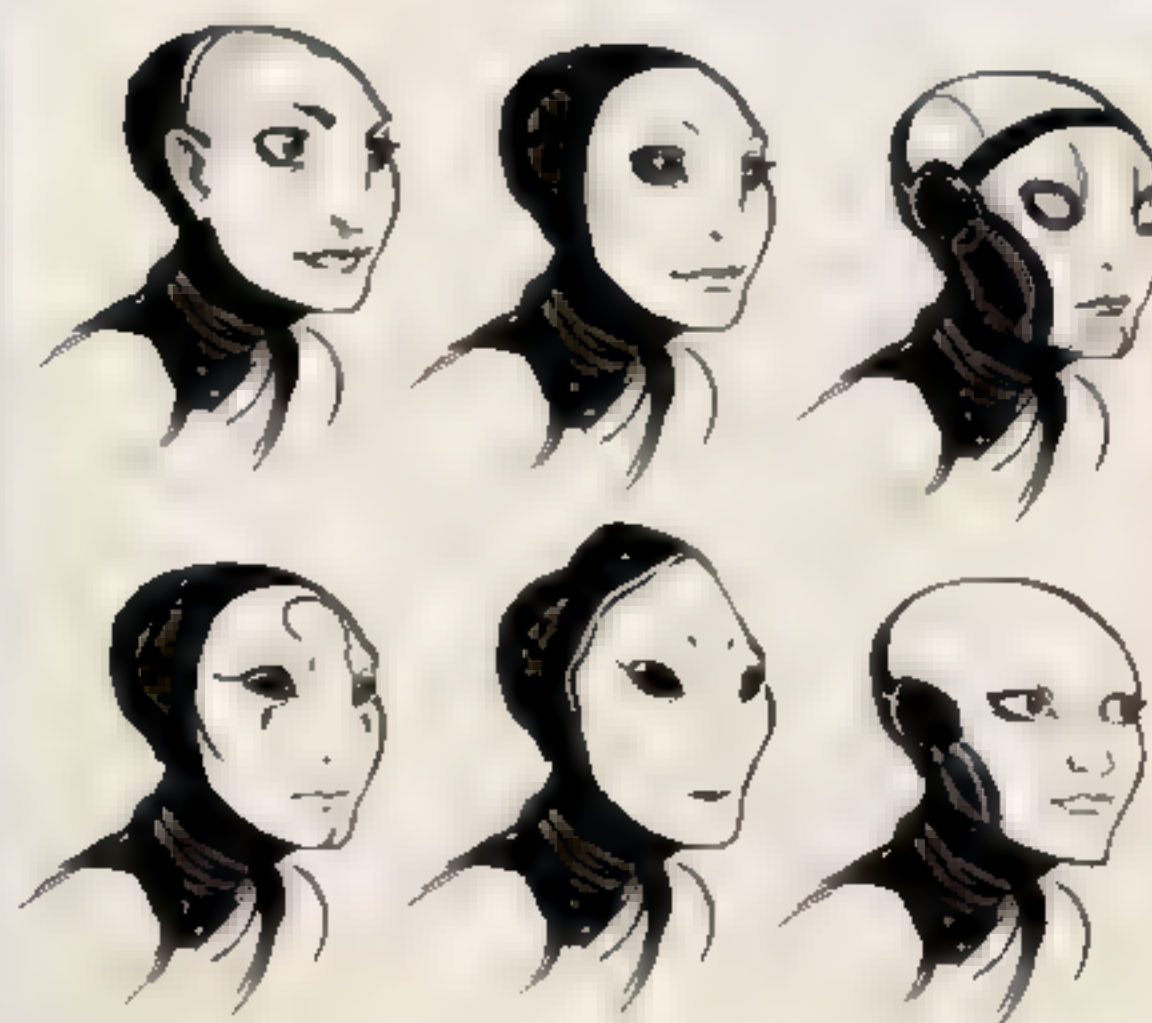
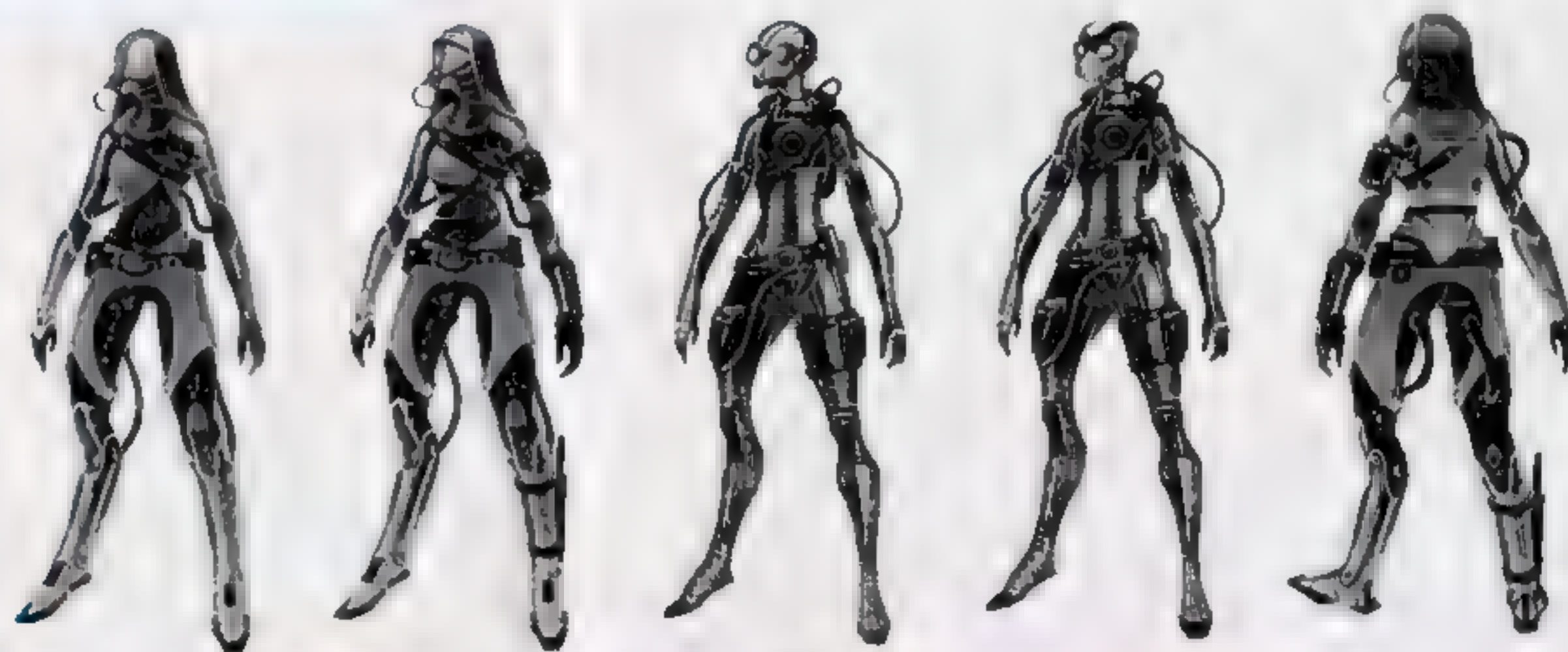
"I remember skiing when we were coming up with a logo, some kind of graphics to put on Shepard's armor," Watts says. "I removed one of the 7s from the N77 and thought: 'That sounds great.' I typed it out in the font we were using. It looked really good. And I just decided to add that red section on the end ... I didn't think much about it—just, 'Hey, I'll put this on there.' And then it really took off."



### BIO-TRIVIA

TALI'S NAME USED TO BE TALS!

Coming up with the names for alien species is one thing. Finding names for individual alien characters is a heck of a hard thing to brainstorm. Writers will end up with pages of weird words before settling on one that sounds weird in just the right way. Sometimes, a word will be close, and all that's needed is to take out a letter, as in the case of iconic quarian squad mate Tali who was originally Tals!





## MASS EFFECT INTELLECTUAL PROPERTY GUIDE 2007

**MASS EFFECT PRESENTED** a new galaxy to explore: our galaxy, populated by an array of alien cultures, planets, and tech foreign to players. This was not *Star Wars*. This was not *Dungeons & Dragons*. This was a new IP from BioWare—only its third, after *Shattered Steel* and *Jade Empire*—and it was a lot.

So, the narrative team distilled the core elements of *Mass Effect* into a sleek-for-2007 guide to the new intellectual property, meant to allow anyone on the team or otherwise supporting the game's development or promotion to catch up. The book outlined the game's alien species, its themes, and its plans for its human hero, Commander Shepard.

This book was confidential when printed, and this excerpt is the first time the public has seen these pages.

This is a guide to the *Mass Effect* universe, outlining the key aesthetic and creative principles that define the intellectual property. It will help those who work with the property to ensure that current and future *Mass Effect* products maintain a consistent flavor and overall quality.

This guide covers the principles behind the art style, sound, and music, and cinematic presentation, as well as writing guidelines and setting-specific nomenclature. Descriptions of key locations, characters, and other aspects of the *Mass Effect* universe are also included.

This document is copyrighted by BioWare Corporation. It cannot be copied or distributed without explicit written permission from BioWare Corporation.

Certain items in this document have been called out as spoilers.




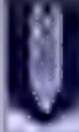





Items that must never be discussed in any medium, be it print or the game itself. Even internal communications must treat these items with confidentiality. In ANY release, if these will destroy the story beats.









Items that should only be revealed through the course of the game and therefore should not be discussed publicly, but are not quite as "life and death" as the red items.

Item is designated for post-release content.

### CONFIDENTIAL INFORMATION

Supreme Commander	Fleet Admiral	
	Supreme Commander	
	Rear Admiral/General	
Commander	Captain/Major	
	Staff Commander	
	Leutenant Commander	
Lieutenant	Staff Lieutenant	
	1st Lieutenant	
	2nd Lieutenant	

Chief	Operations Chief	
	Gunnery Chief	
	Service Chief	
Trooper/Crewman	Serviceman 1st Class/Corporal	
	Serviceman 2nd Class/Private 1st Class	
	Serviceman 3rd Class/Private 2nd Class	

Alliance Marine Corp.  
MARINE

Alliance Navy  
NAVAL

Special Ops Command  
OPS

Naval Flight Service  
FLIGHT

Naval Engineering  
ENGINEERING

Naval Intelligence  
INTELLIGENCE



In a nod to classic TV sci-fi, some aliens in *Mass Effect* were specifically designed to almost look like human actors wearing makeup and prosthetics. The asari, for example, have human faces, albeit blue and framed by alien features. Early versions of the asari actually had hair.



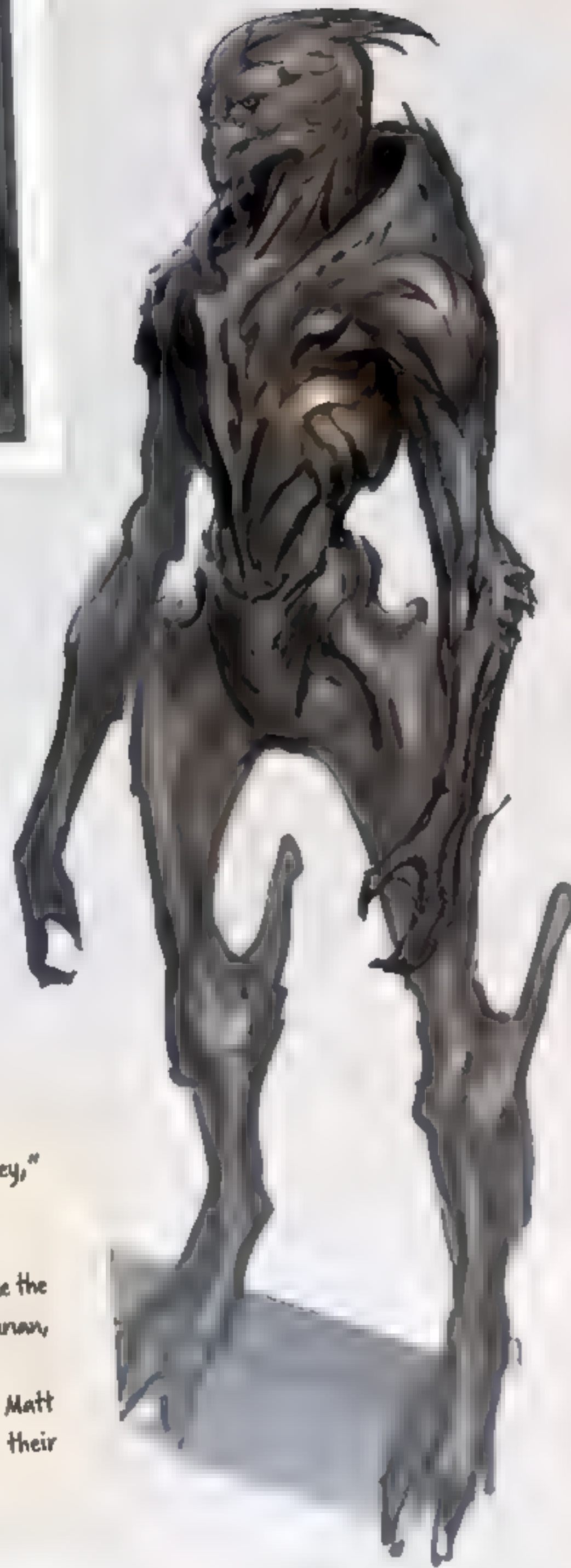




"The guideline for the turian was: we want them to be birds of prey," *Mass Effect* concept artist Matt Rhodes says.

Matt experimented with a variety of shapes for the turian. They wanted a wide range of alien life. Some closer to human, like the asari (opposite). Some definitely not (see the various iterations of turian, left).

"We're interested in character. We're pulled to personality," Matt says. "So for all the aliens, it was a challenge to make sure their personality could still come through."



## BIO-TRIVIA

### BIOWARE PATENTED THE CONVERSATION WHEEL

When developing *Mass Effect*, project director Casey Hudson and the design team led by Preston Watamanuk decided to reinvent BioWare conversations, using a wheel to display options instead of the list found in more traditional BioWare RPGs at the time.

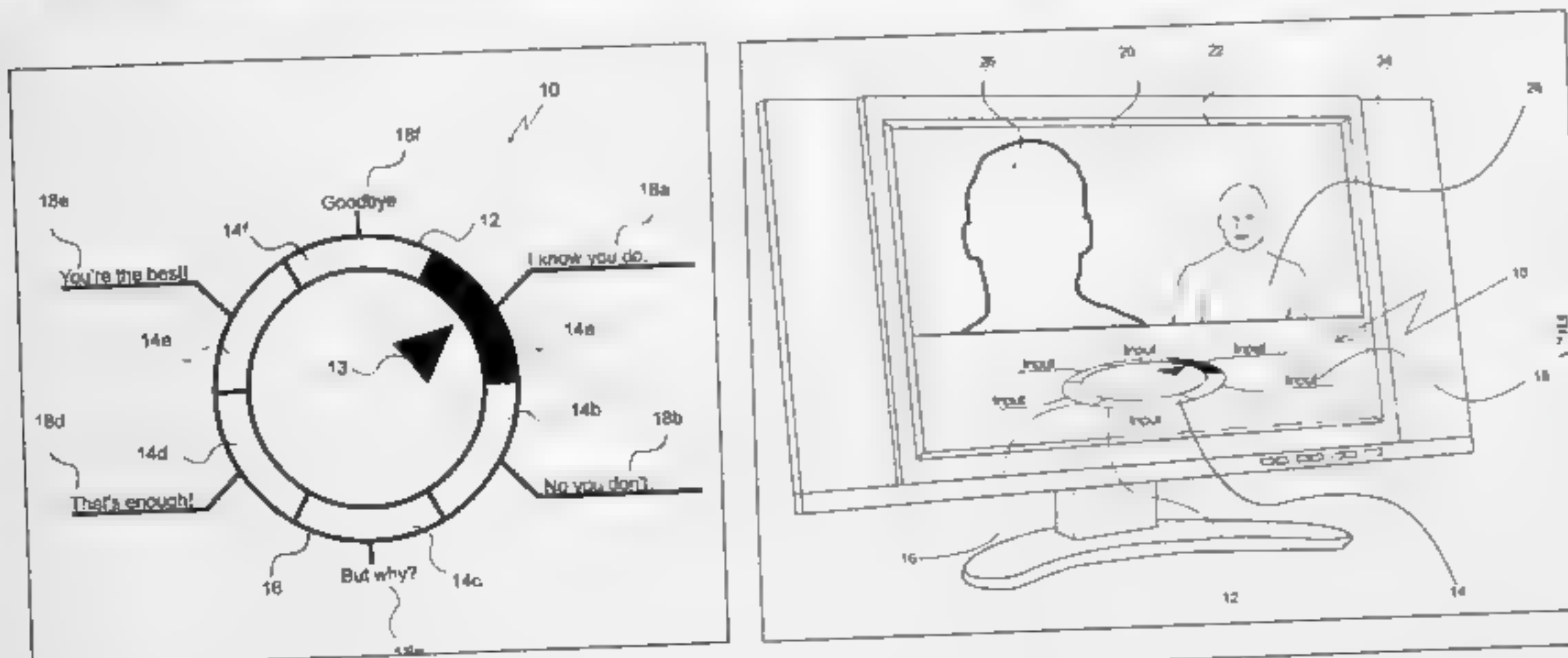
Casey had been frustrated with reviews of *Jade Empire* that had criticized the action-centric game for being too wordy.

"I'm like, story is words. You go to a movie, the entire movie is words. It's people talking. And so what's it about our games that is making people feel like they're wordy?" Casey wondered. Then he thought: "In a game, you kind of need to feel like you're continuing to play it. Maybe you should continue feeling like you're playing it actively even into the dialogue."

Casey and a handful of other talented developers came up with a wheel, using positions connected to the axis of a thumbstick or a mouse to give players quicker access to conversation options. Lines that had been written verbatim for silent protagonists were now paraphrased to fit at points around a circle.

"It kind of gave a new experience with dialogue where you did start to react based on emotion," Casey says, "and that's ultimately what we're trying to bring out in our games."

It was an idea bold enough that BioWare decided to patent it, a first for the studio.

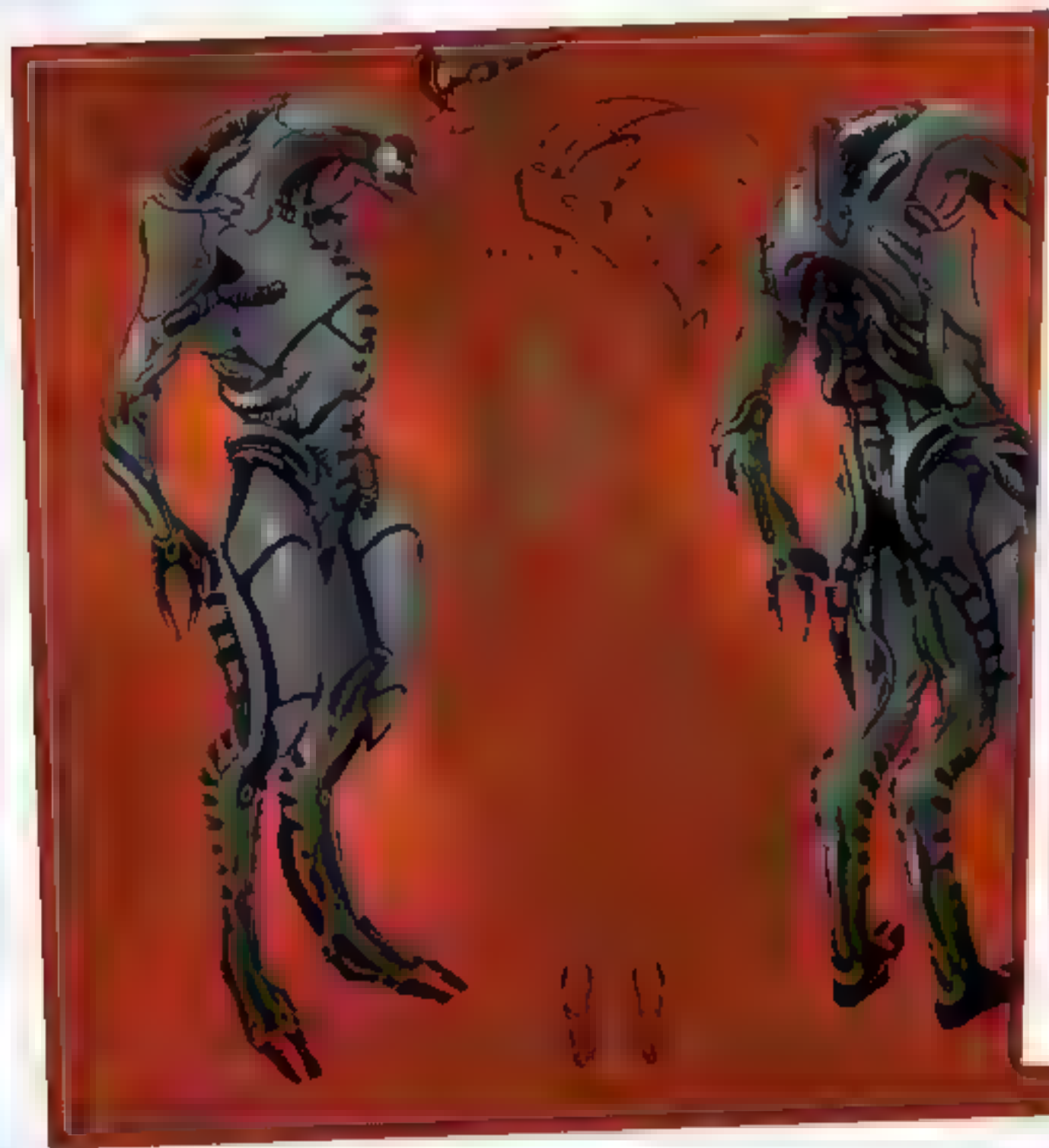


## US Patent US20070226648A1:

### Graphical interface for interactive dialog

**Abstract:** A system and method for creating conversation in a computer program such as a video game. A plurality of classes of dialog is provided and a conversation segment is assigned to each class. A graphical interface is displayed during operation of the program that provides a choice indicator, wherein the choice indicator has a plurality of selectable slots, each associated with a dialog class. The graphical interface is consistent as to the position of dialog classes throughout at least a segment of the program.

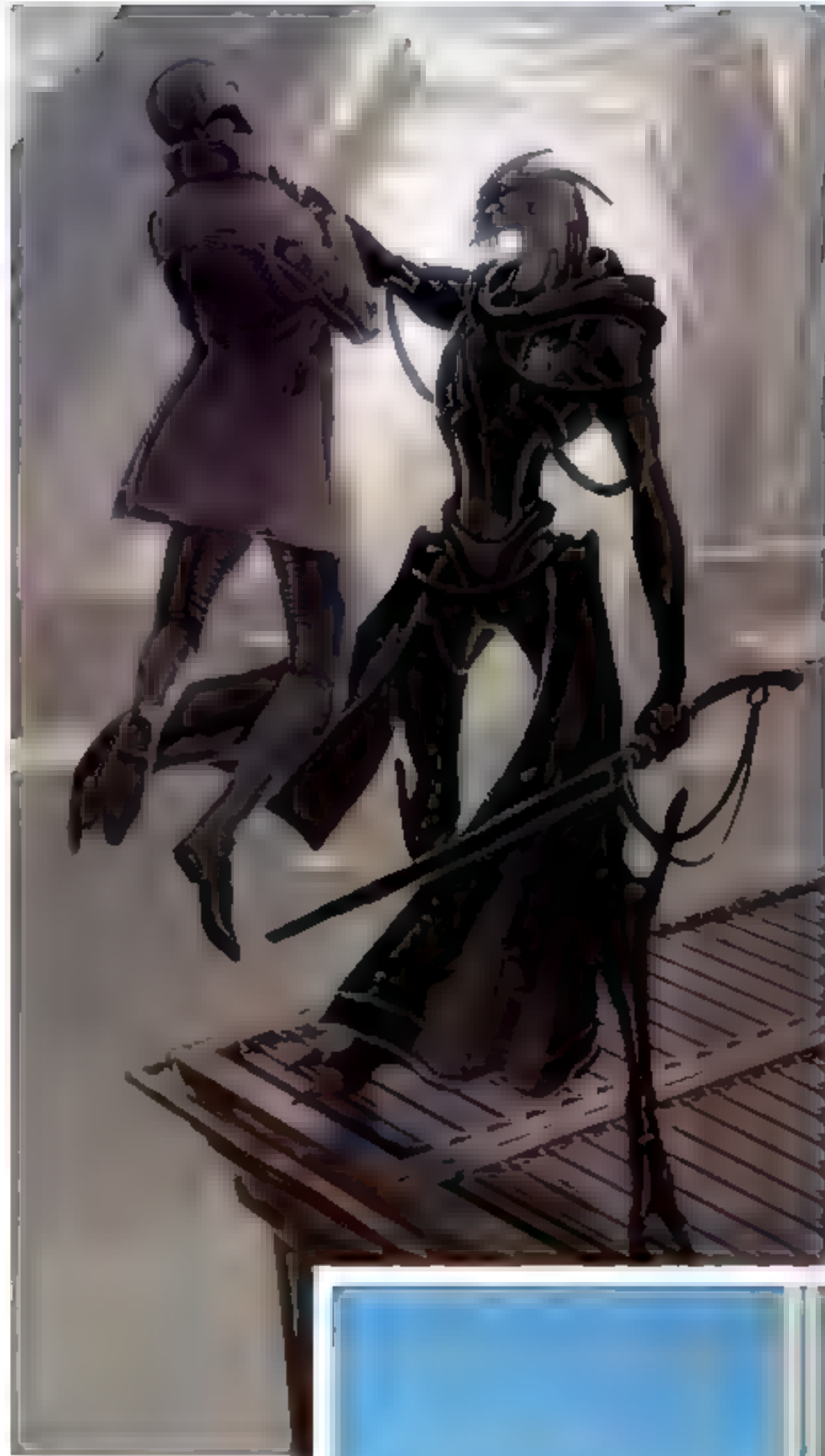
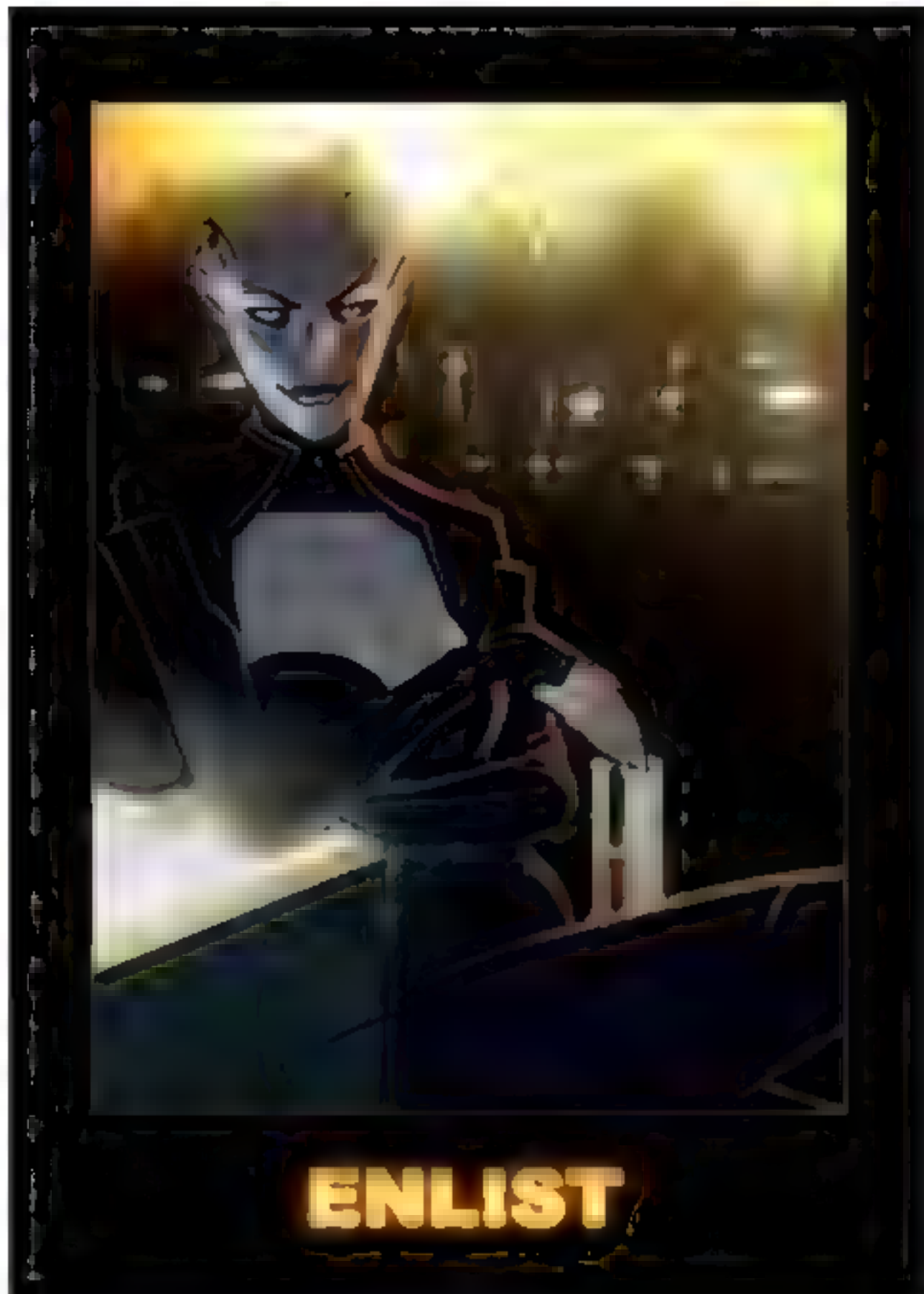




The original concept for the krogan face is based on a bat. "There's a particular kind of bat that has this really wide, squidgy face. We just used its face on top of this weird body and it kinda worked," *Mass Effect* concept artist Matt Rhodes says.

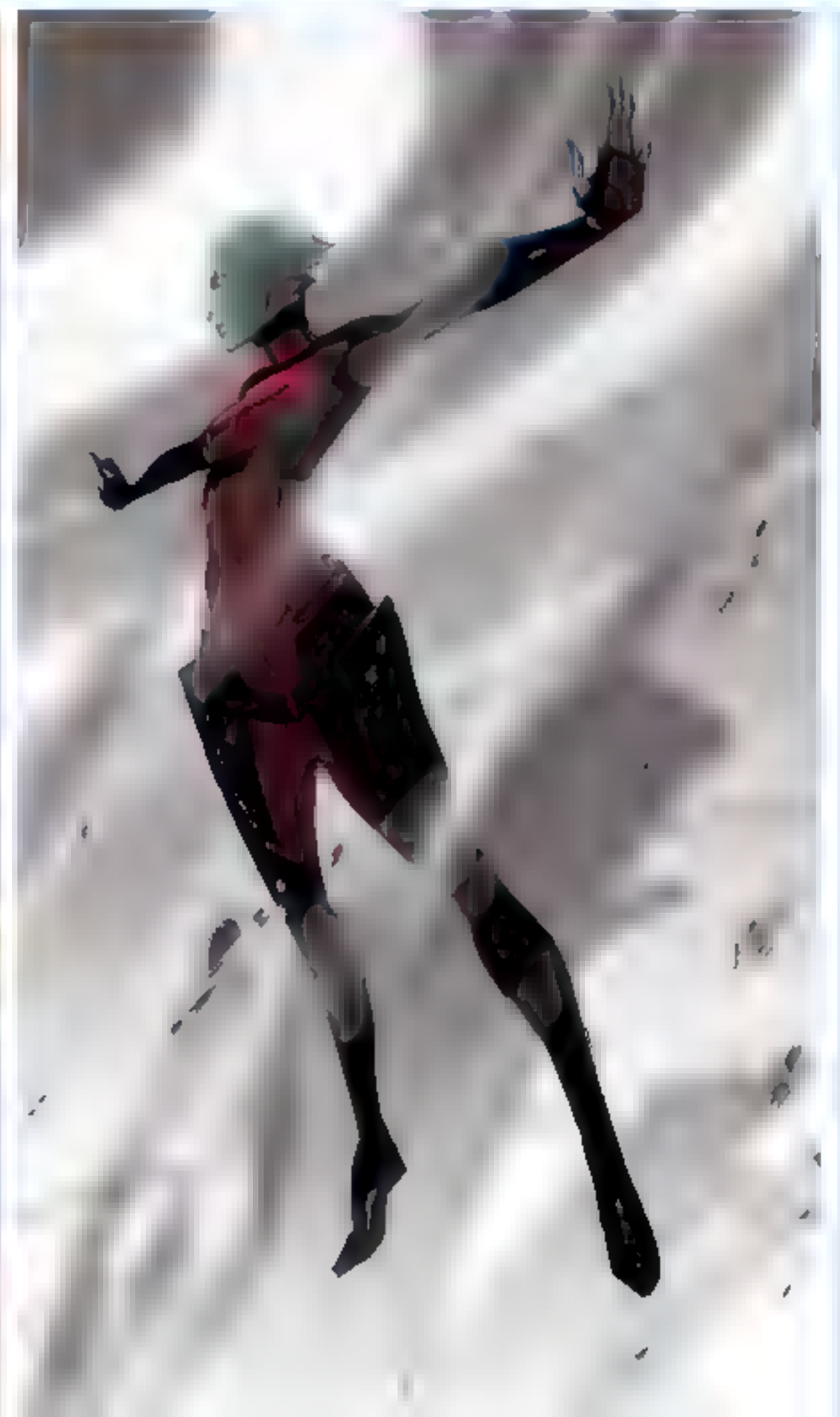
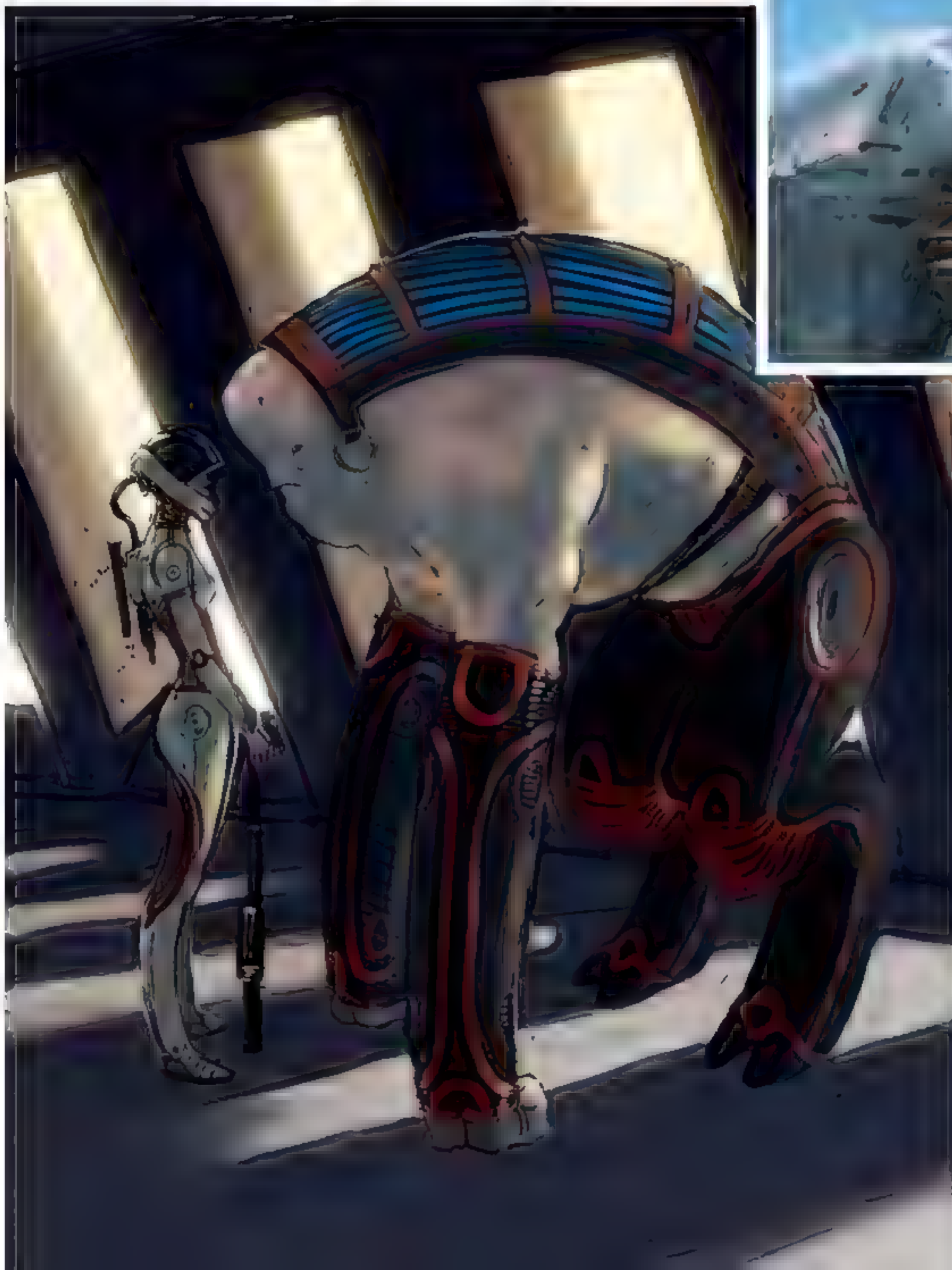
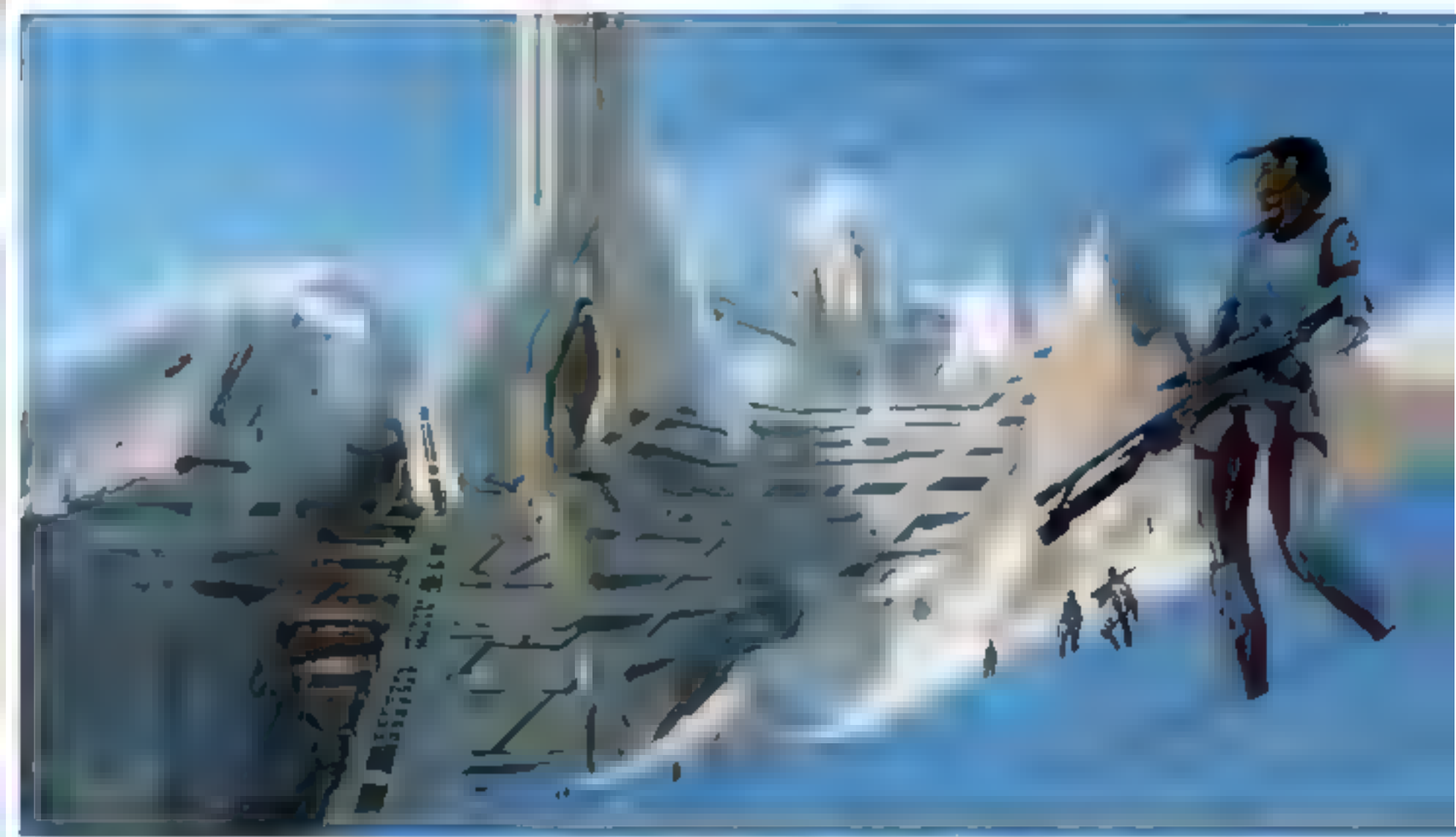
The musculature of the synthetic life forms known as the geth (top) was inspired by fiber-optic cables, with flexible plates of armor attached to protect it.



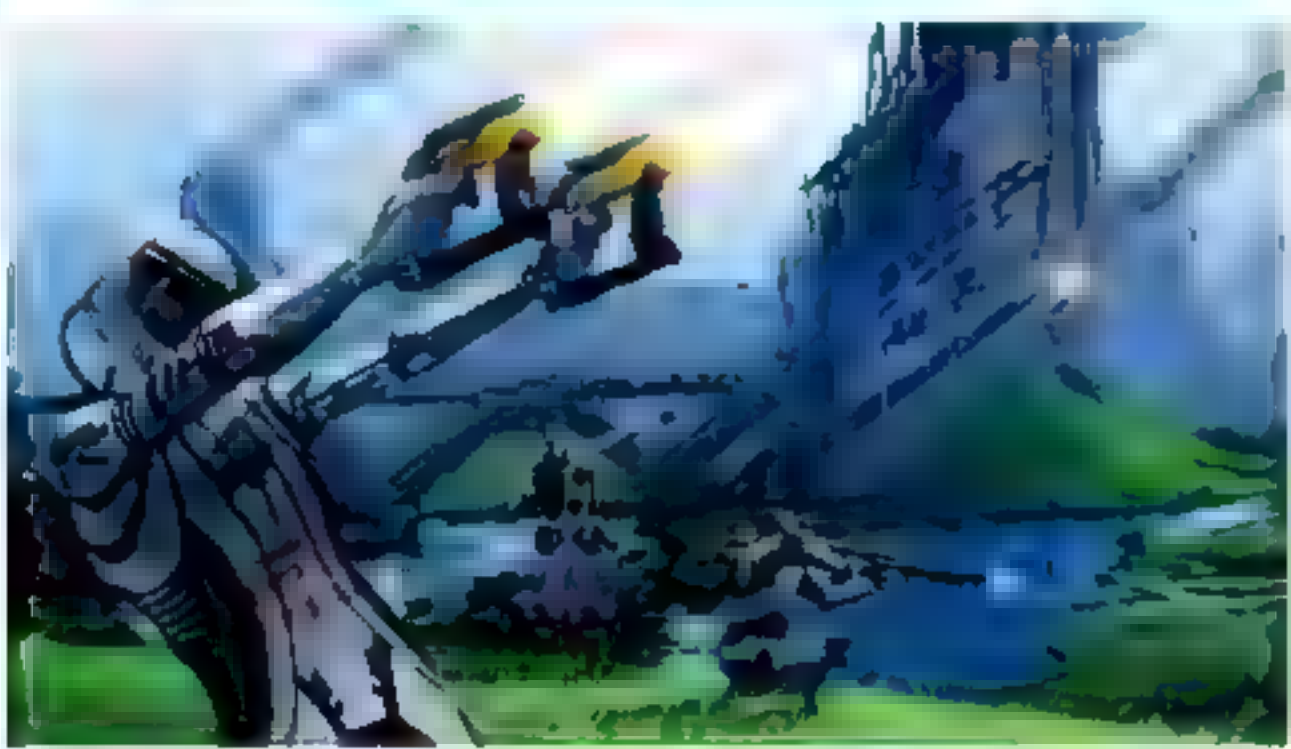
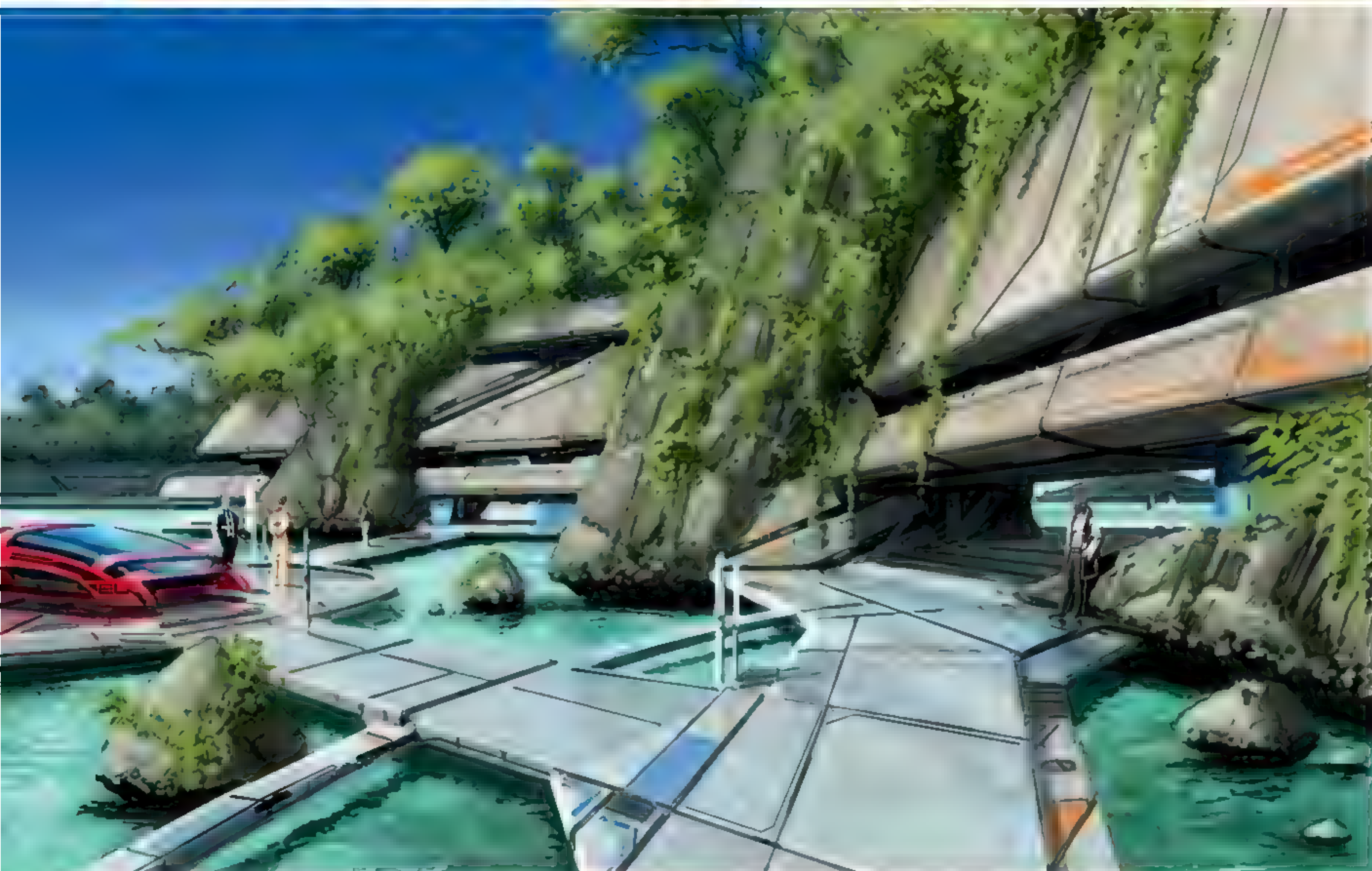
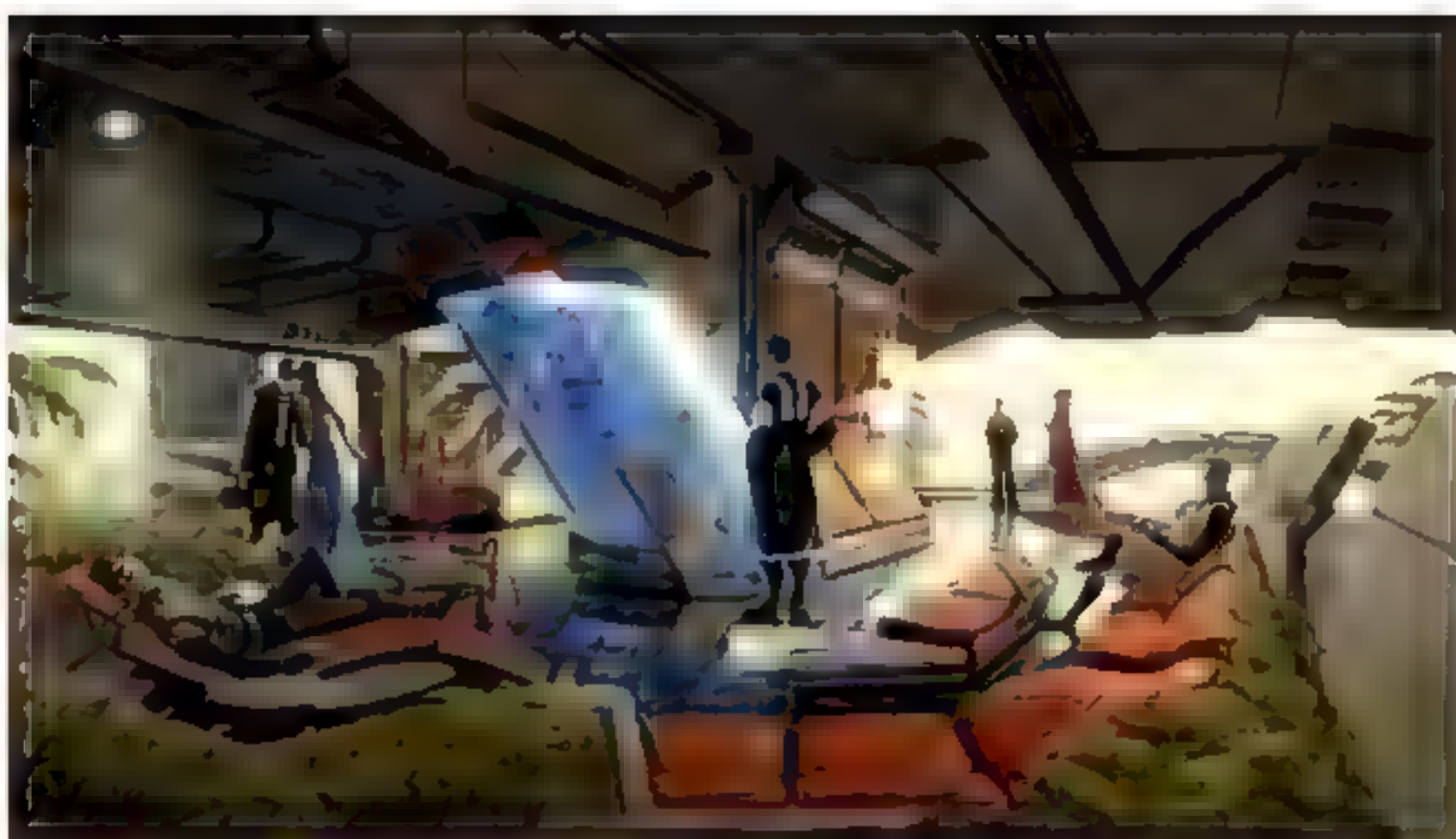
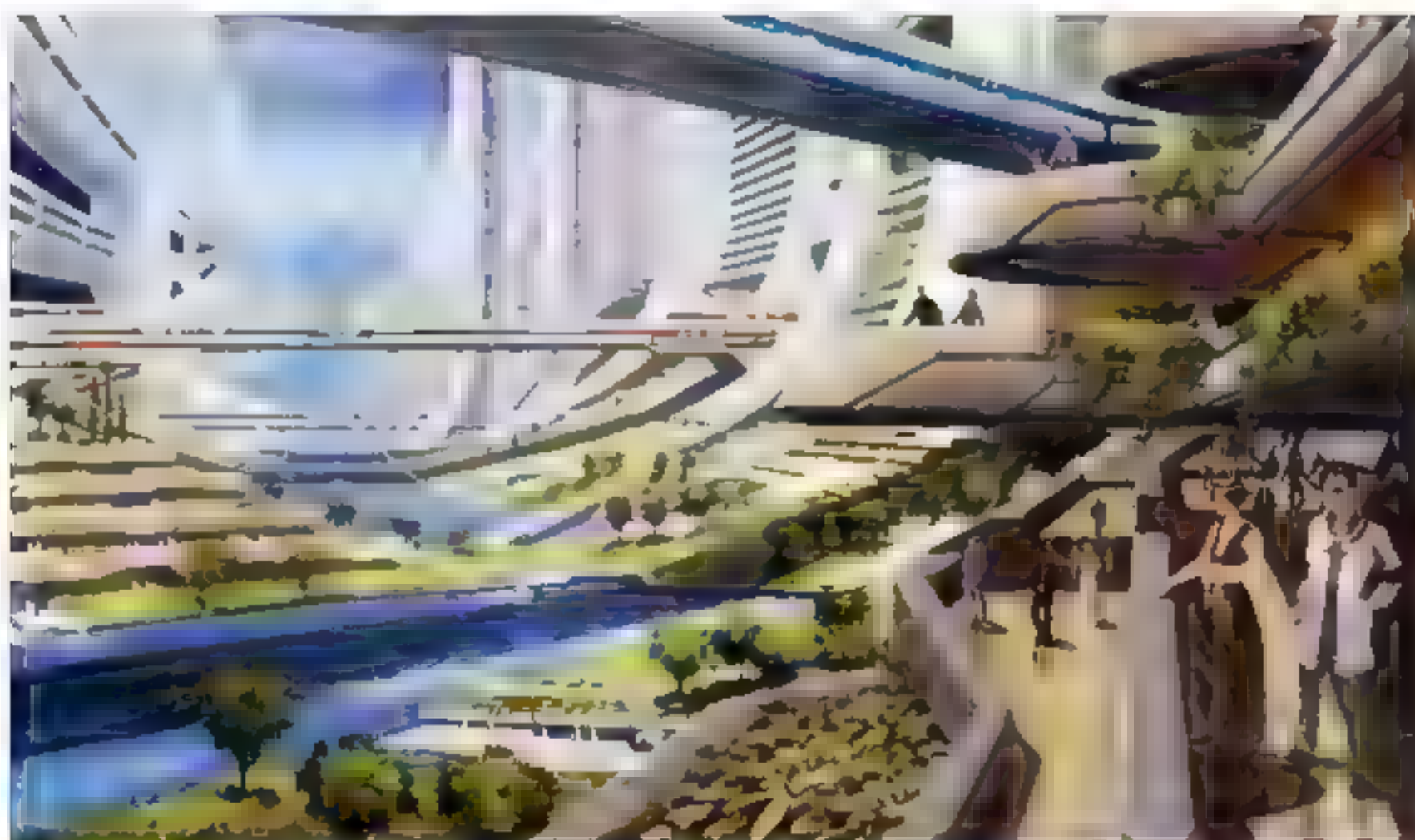


This concept drawing of Samara lifting  
 Mako Shepard is by the new staff  
 artist, who is working on the  
 character's design. The  
 character is a new addition  
 to the team.

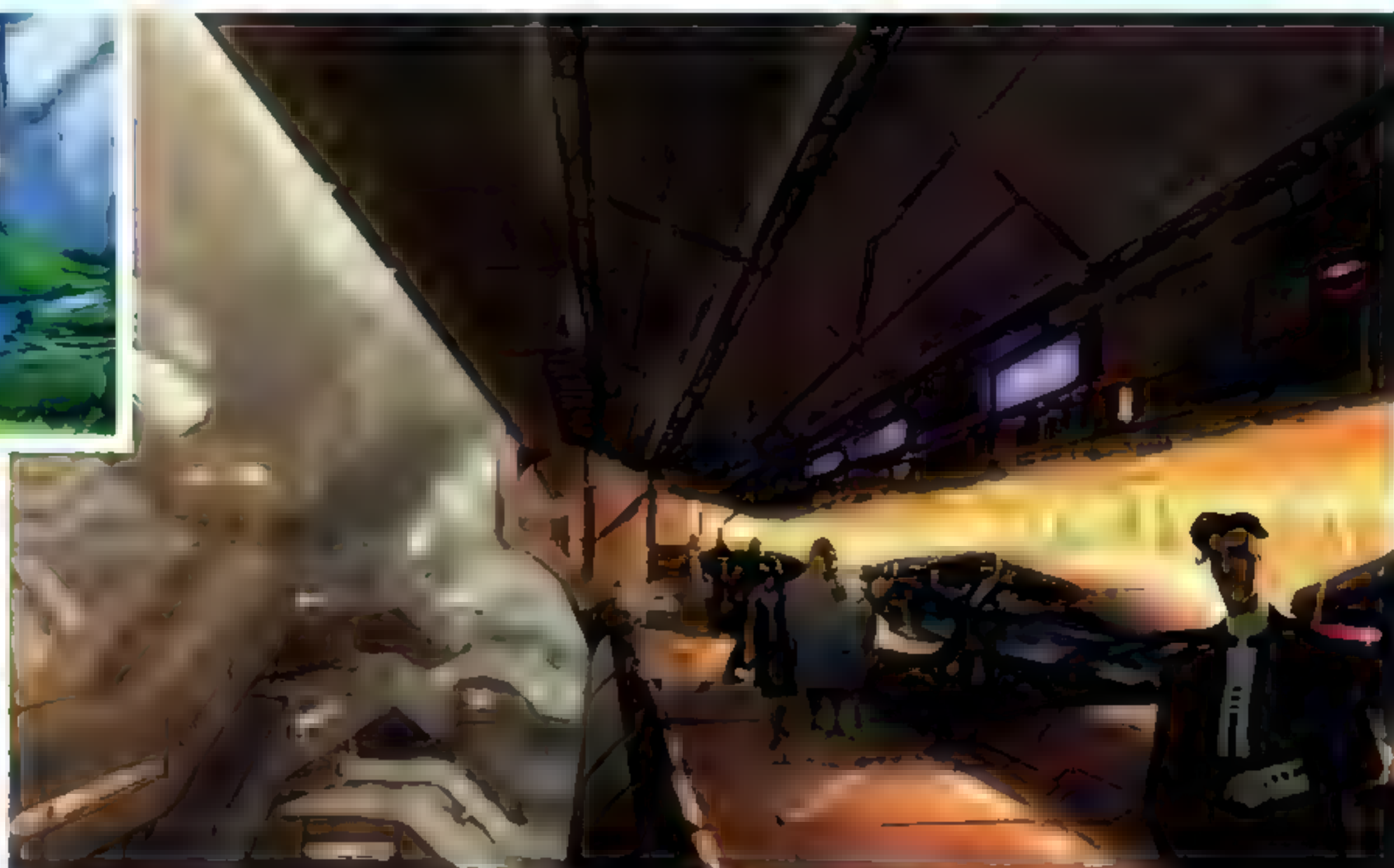
As the Mass Effect story  
 develops, the team is  
 working on the character's  
 design. The character is a  
 new addition to the team.  
 The character is a new  
 addition to the team.



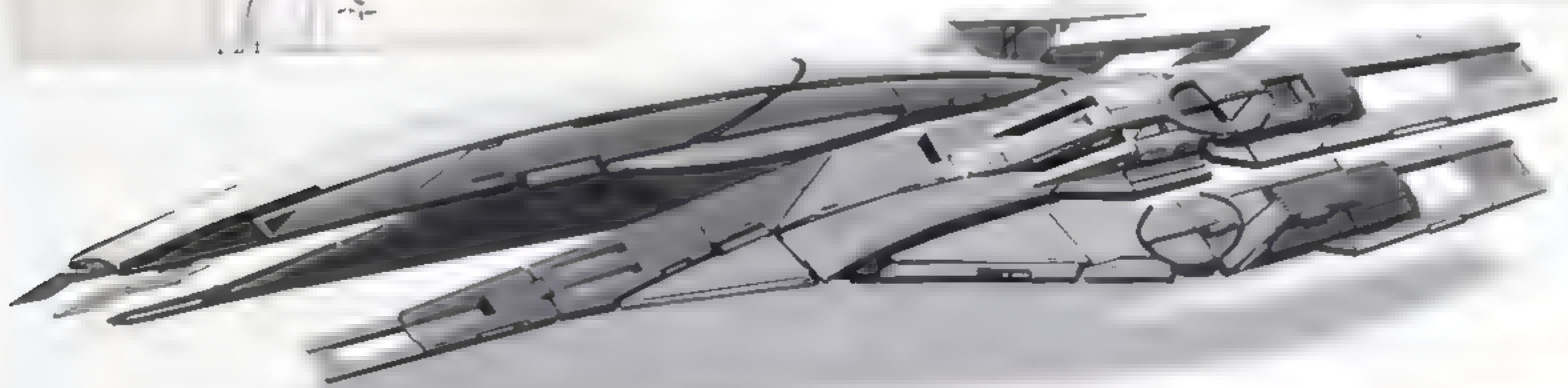




Mus. *Ethereal* concepts meant up the game, with a focus on how the design to explore how these elements might interact with one another. Often, art director Derek Watts would draw location and action and concept artist Matt Rhodes would go in and add the characters.





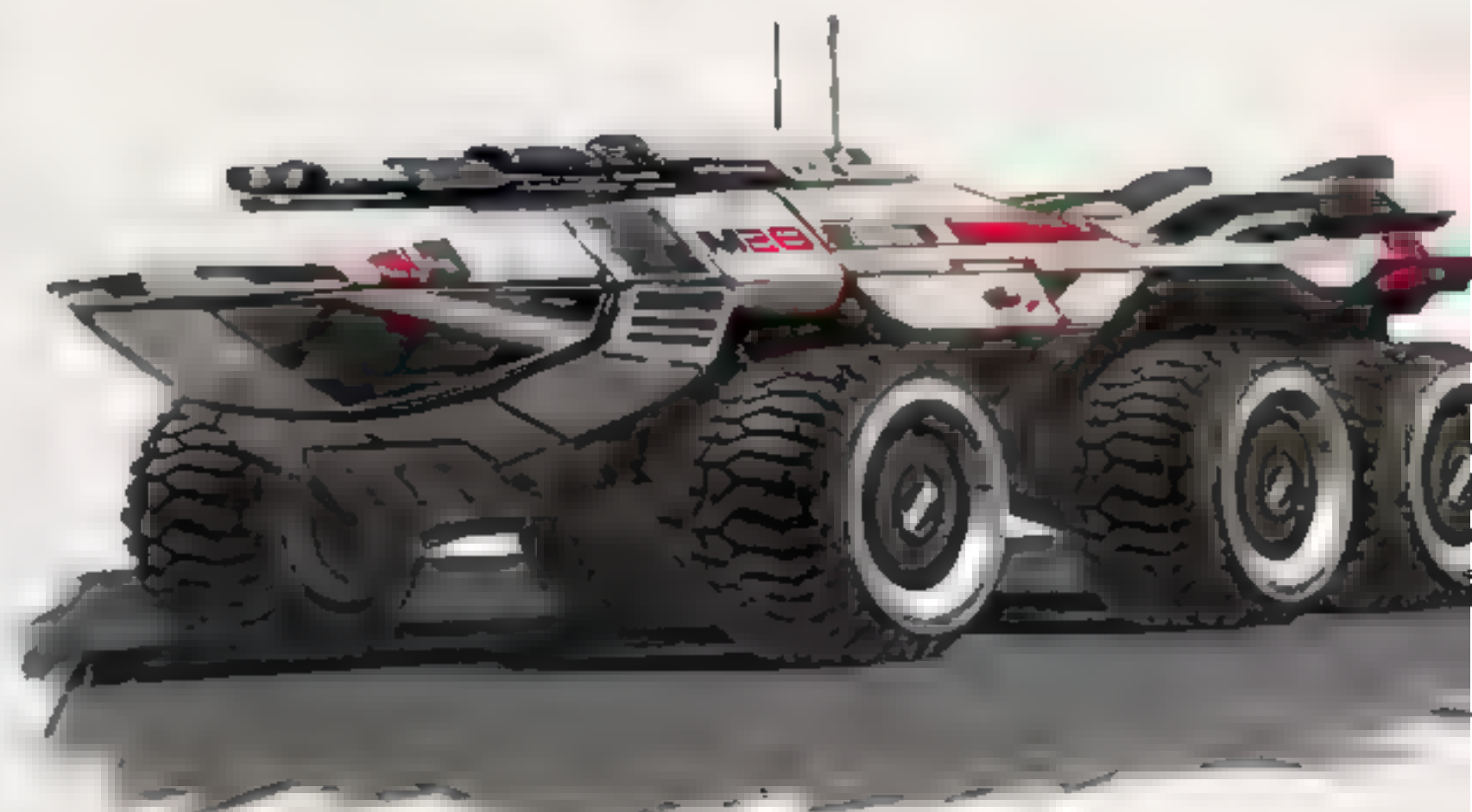


For a period while *Mass Effect* was in development, a private equity investor group called Elevation Partners that included V2 frontman Bono was a major shareholder in BioWare.

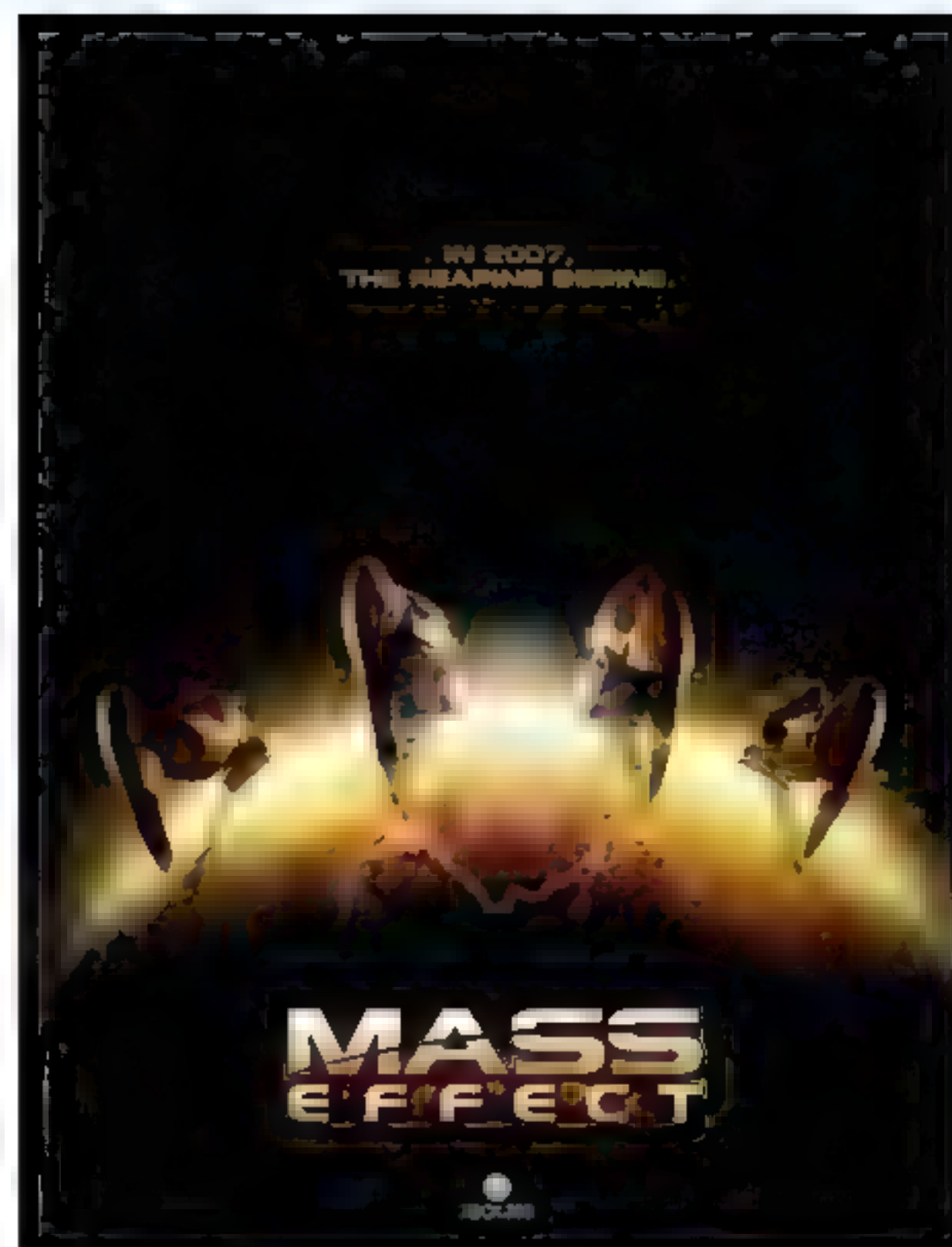
BioWare cofounders Ray Muzyka and Greg Zeschuk remember demoing *Mass Effect*'s opening to Bono while they were down in Los Angeles.

"He had ruptured a disk, so he was in agony," Ray says. "He was lying down. He put his legs up. He couldn't move." In spite of this, Ray says Bono leapt off the couch in excitement when they showed him the game's first few minutes.

"The audio design's great. This whole thing . . . it's genius!" Greg remembers Bono saying. Both Ray and Greg say they learned a lot from Bono. "He talked about the importance of the band being the team. And treating everyone equally," Ray says. "And the importance of running V2 as a business and how that would translate, brainstorming about how that worked from a games perspective."

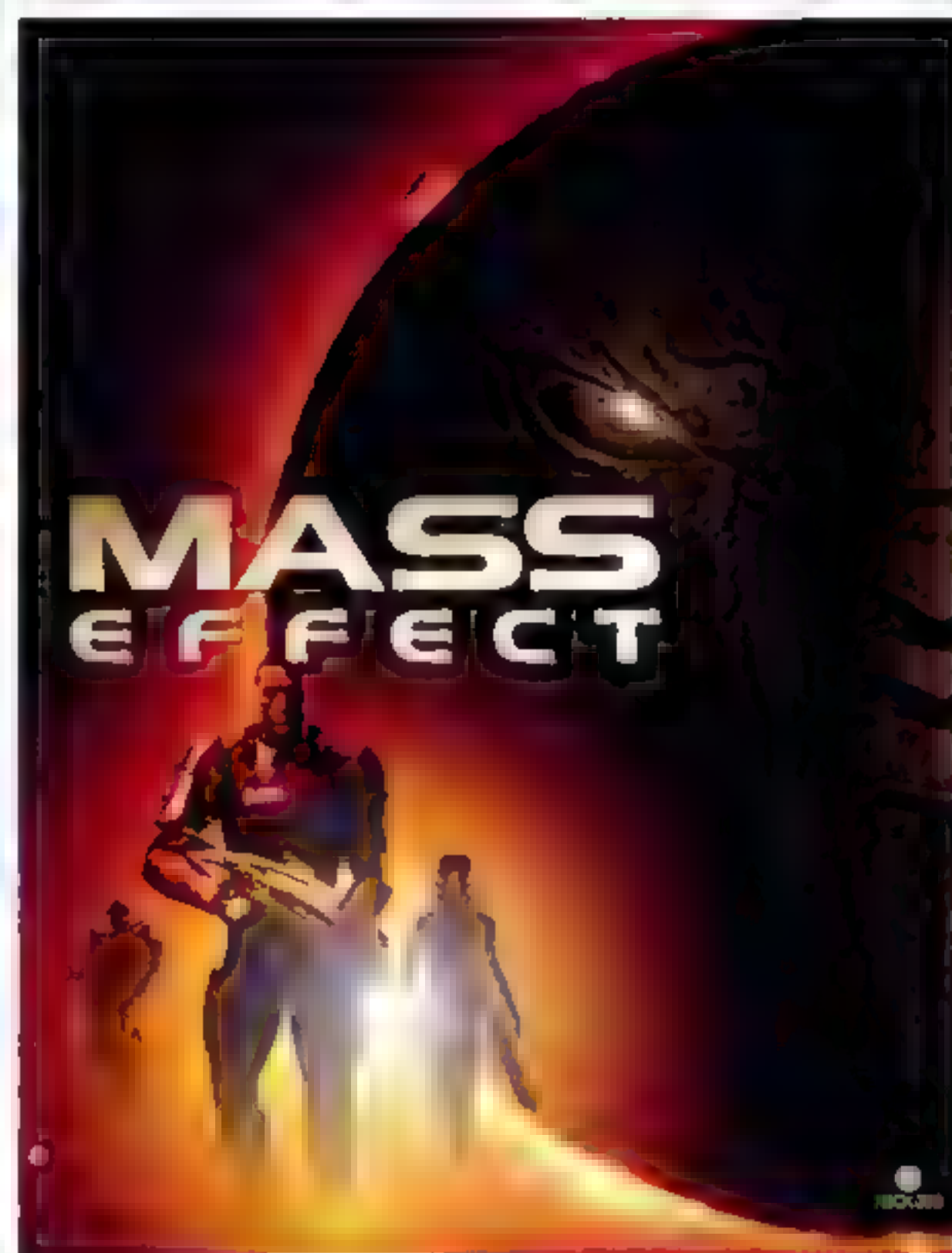
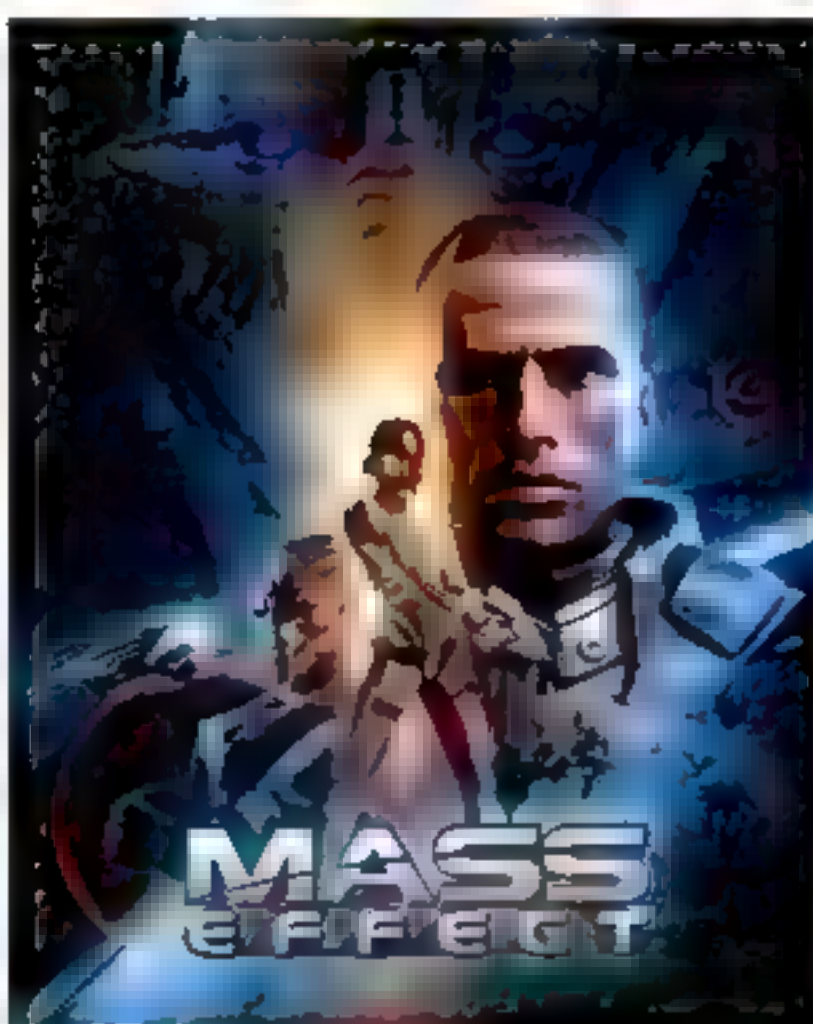






## FINDING *MASS EFFECT*'S COVER ART

BIOWARE HAS A HISTORY of celebrating its games with iconic key art made up to look like movie posters. Finding the right cover art for the first *Mass Effect* was notably tricky, with numerous iterations floated and rejected before the team found one that really popped—Shepard and team in the foreground, ready for a fight, and antagonist Saren menacingly looming above.









## A HELMET TELLS A HECK OF A STORY

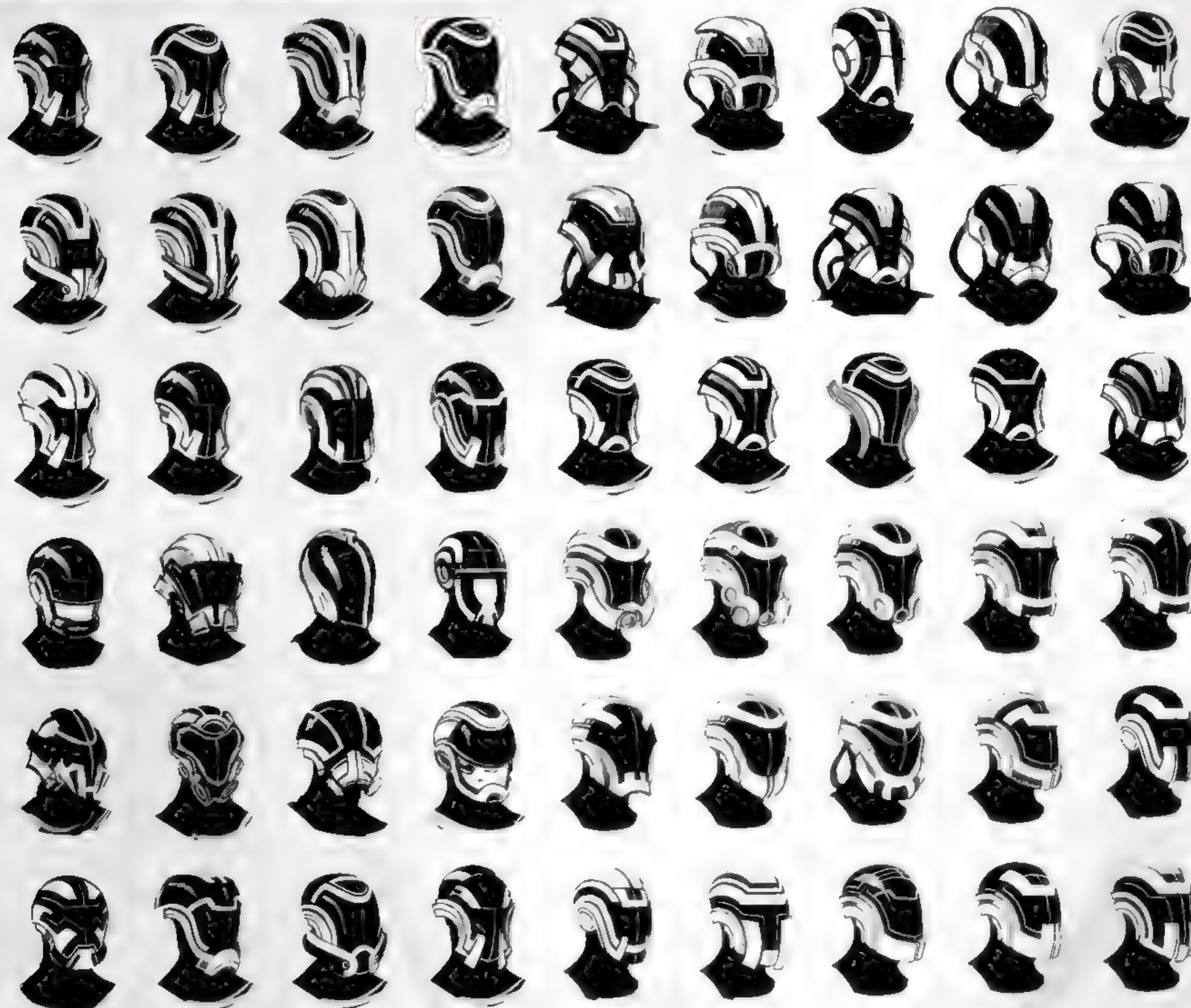
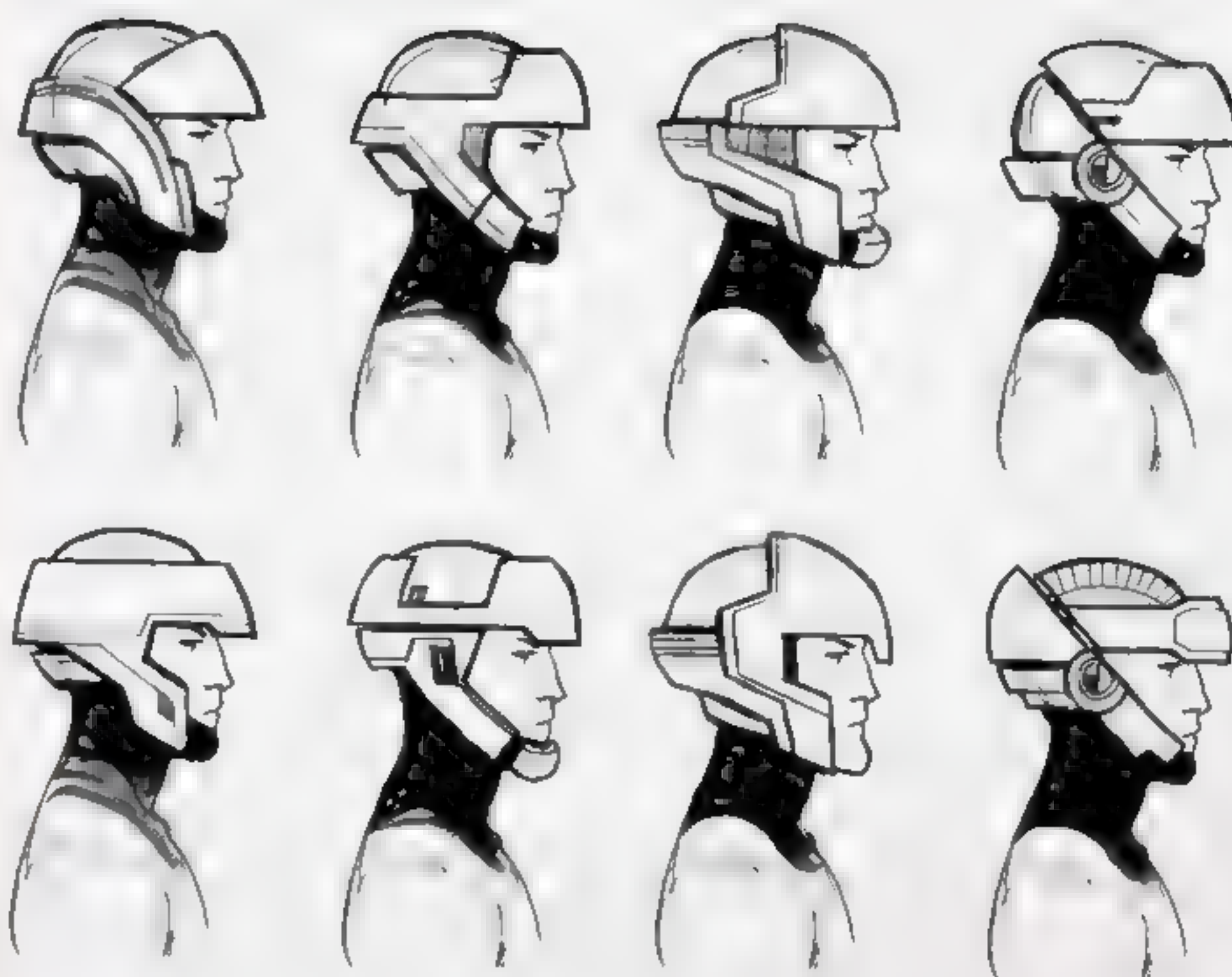
**DRAGON AGE ART DIRECTOR** Matt Rhodes got his start drawing helmets for *Mass Effect*, including one that would become Shepard's iconic "second face."

In game, Shepard could have whatever face players chose for the character. But in combat, while exploring planets, and even in some conversations, Shepard would don a specific helmet, one that needed to be distinct and memorable.

"It was like trying to come up with the face for the protagonist, really," Matt says. "When you're designing any helmet, that's how you have to think about it: Would this character be happy wearing this as their second face?"

Matt estimates he designed between 250 and 270 different helmets for *Mass Effect* all told. It was kind of a rite of passage for him, then a junior artist breaking into the games industry.

"When you start, you think it's just different shapes," he says. "As you get older, you start to learn that it's trying to think of different stories."

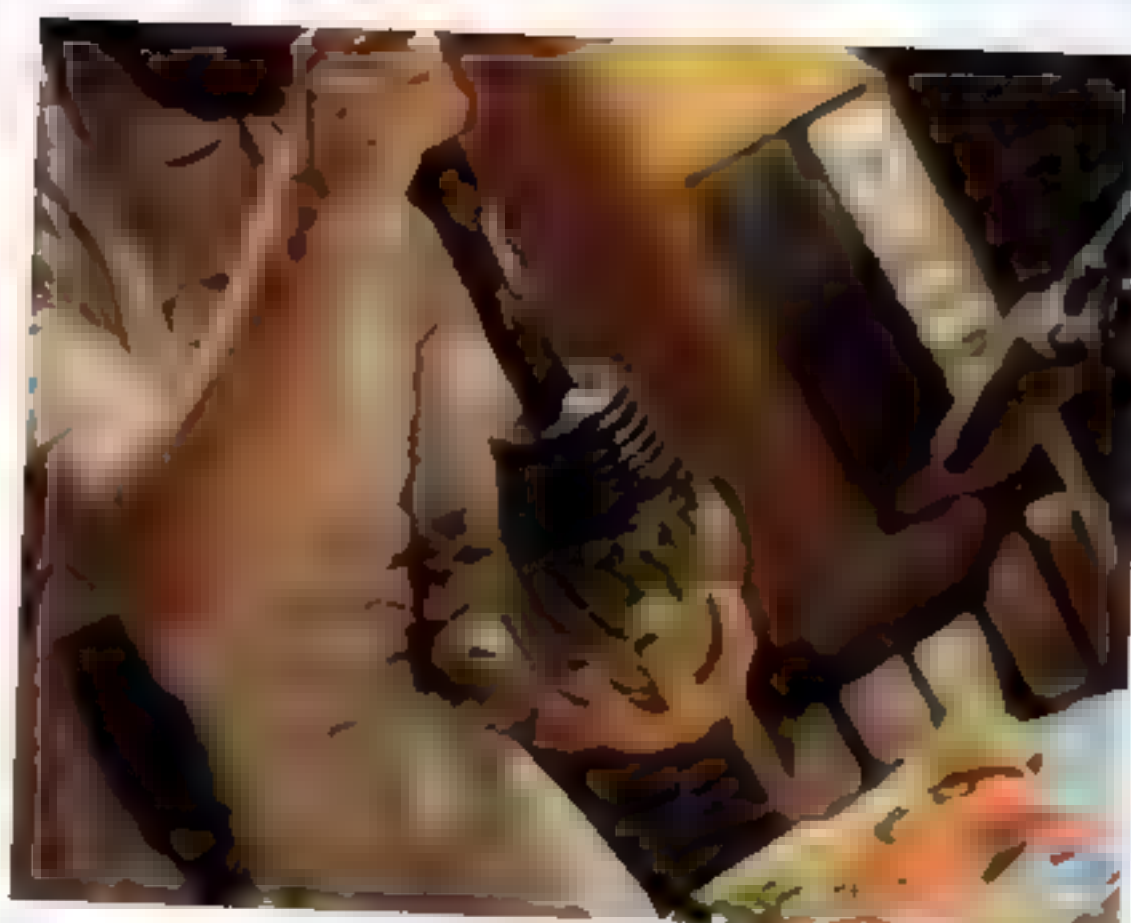




## WATERMELONS AND SLIME

THAT SOUND IS NOT WHAT YOU THINK IT IS

BIOWARE'S AUDIO DESIGNERS have gone to clever and often messy lengths to capture sound effects that mimic sword blows, laser fire, and magical attacks. Stand-ins for these sounds may include everything from smashing watermelons with sledgehammers to sticking fists into various goos. It may not look pretty, but it's the sounds that count.



### BIO-TRIVIA

THERE'S A SECRET IN THE  
BACKGROUND SOUND OF  
ME2'S NORMANDY

If you've played *Mass Effect*, you've likely heard its iconic main theme, written by Jack Wall and Sam Hulick, which plays over the game's opening and other key moments in Shepard's story.

The audio team had fun trying to slip the song into unexpected places throughout the trilogy. "We were very aware of how powerful that track was for the fans," longtime BioWare audio designer Joel Green says, "and it was tempting to overuse it for any moment that we wanted to make really emotional."

One creative repurposing of the theme was in *Mass Effect 3*, where it was slowed down and reworked as ambient sound for the inside of the *Normandy SR*.

If you listen to it for a really long time, just stand in the *Normandy* and listen, you'll actually hear the notes change slowly," Joel says. "It doesn't sound like music. It sounds like a background ambiance, but it's there."



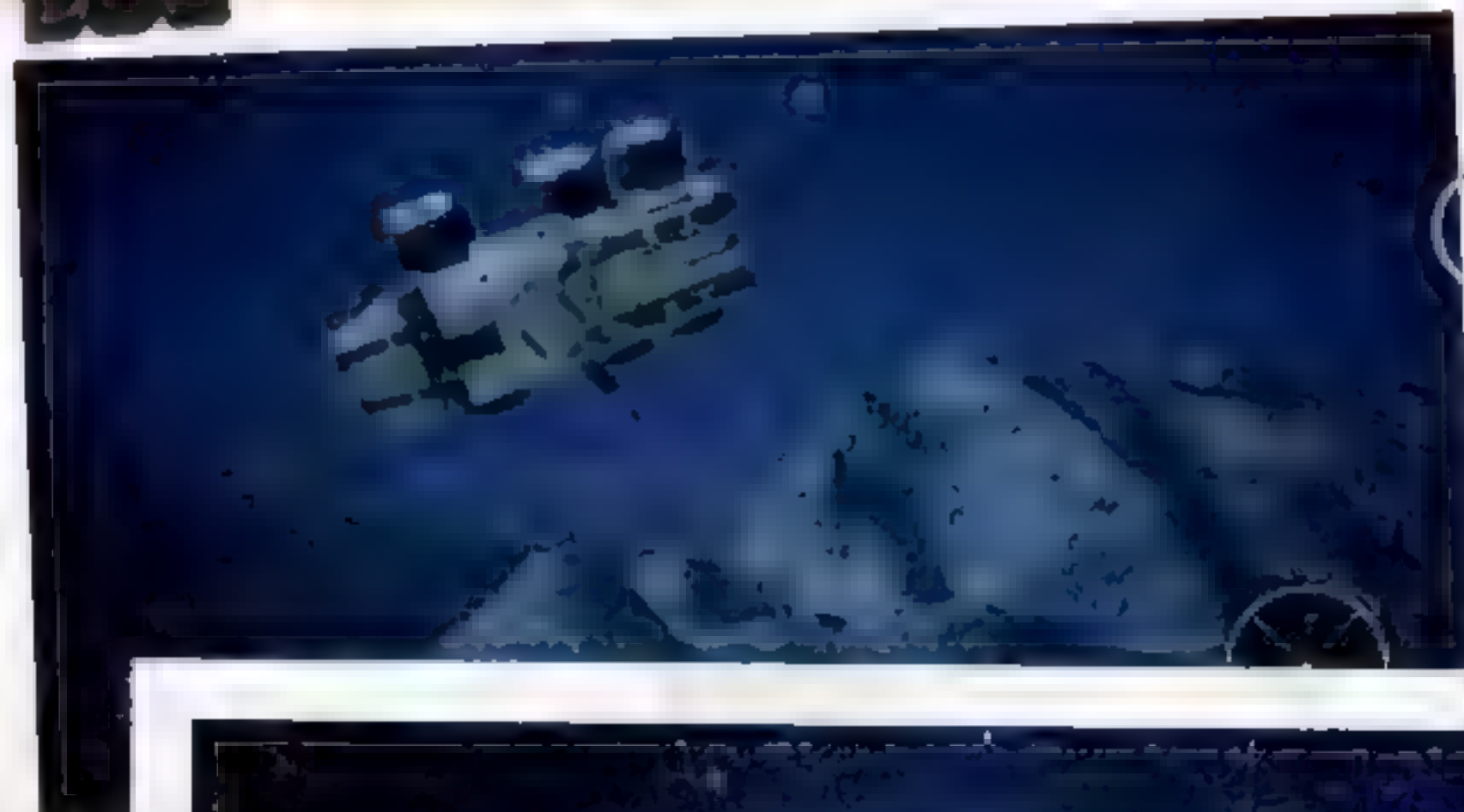
### BUG REPORT: MAKO TORNADO

**Release:** *Mass Effect*  
**Priority:** 2 (Moderate)

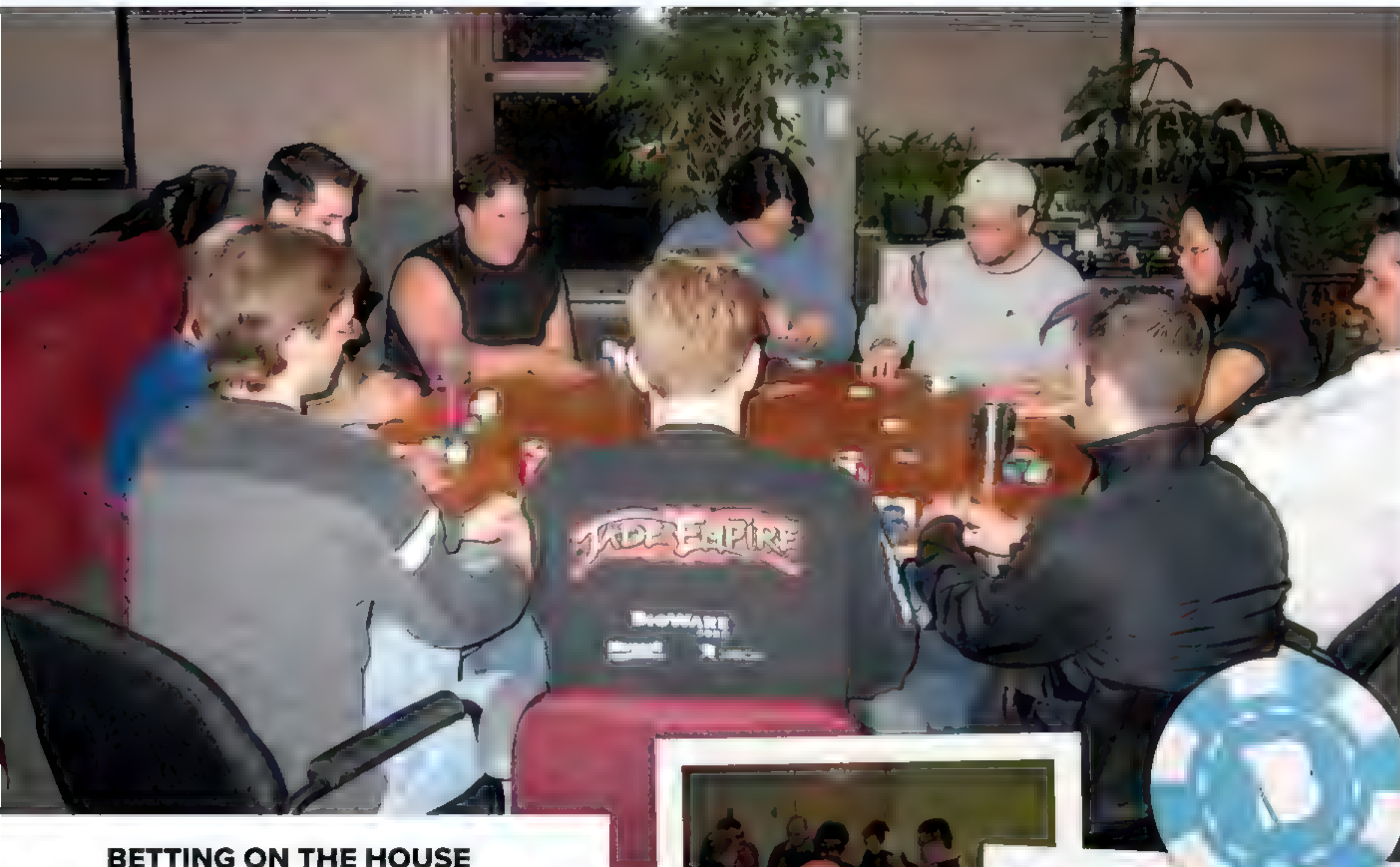
**Description:** There isn't enough friction between the Mako's tires and the ground, causing testers to lose control of Shepard's vehicle and send it spinning into the air like a tornado.

Part of the problem is the Mako's rear-wheel drive, programmer Brenon Holmes says.

"As it turns, the front end comes up, and then it starts spinning and spinning and spinning and spinning faster and faster and faster until it just flies up in the sky."







## BETTING ON THE HOUSE

### THE IMPORTANCE OF POKER AT BIOWARE

COFOUNDER RAY MUZYKA'S love of poker became an important part of studio culture at BioWare. Poker tables were common sights at holiday parties each year, and Ray, who has competed in the World Series of Poker multiple times, organized regular weekend tournaments with staff at BioWare's studios.

At the height of Edmonton's monthly game, upwards of sixty people would show up to play in the lunchroom.

"I bought all the chips personally and gave them to each studio," Ray says. "It was fun to play with your colleagues."

For many of Ray's colleagues, the games were a great equalizer, a chance to get to know a founder of the company they were working for and try to win some of his money.

"They're just another player playing at the table," Ray says. "You're trying to take their money and they're trying to take mine."

It didn't matter if you were an intern or a vice president: if you showed up, you had a seat at Ray's table.

"It wasn't too intimidating," says programmer Patrick Chan, who even came in second once. "Even back then, when he was still head of the studio and he was your boss's boss's boss, he was still very approachable."

Ray has a heck of a poker face, though. Patrick says it was fun to try to get him to crack a smile at the table.

"There were a couple times I was able to get the best of him in a hand or two," Patrick says.

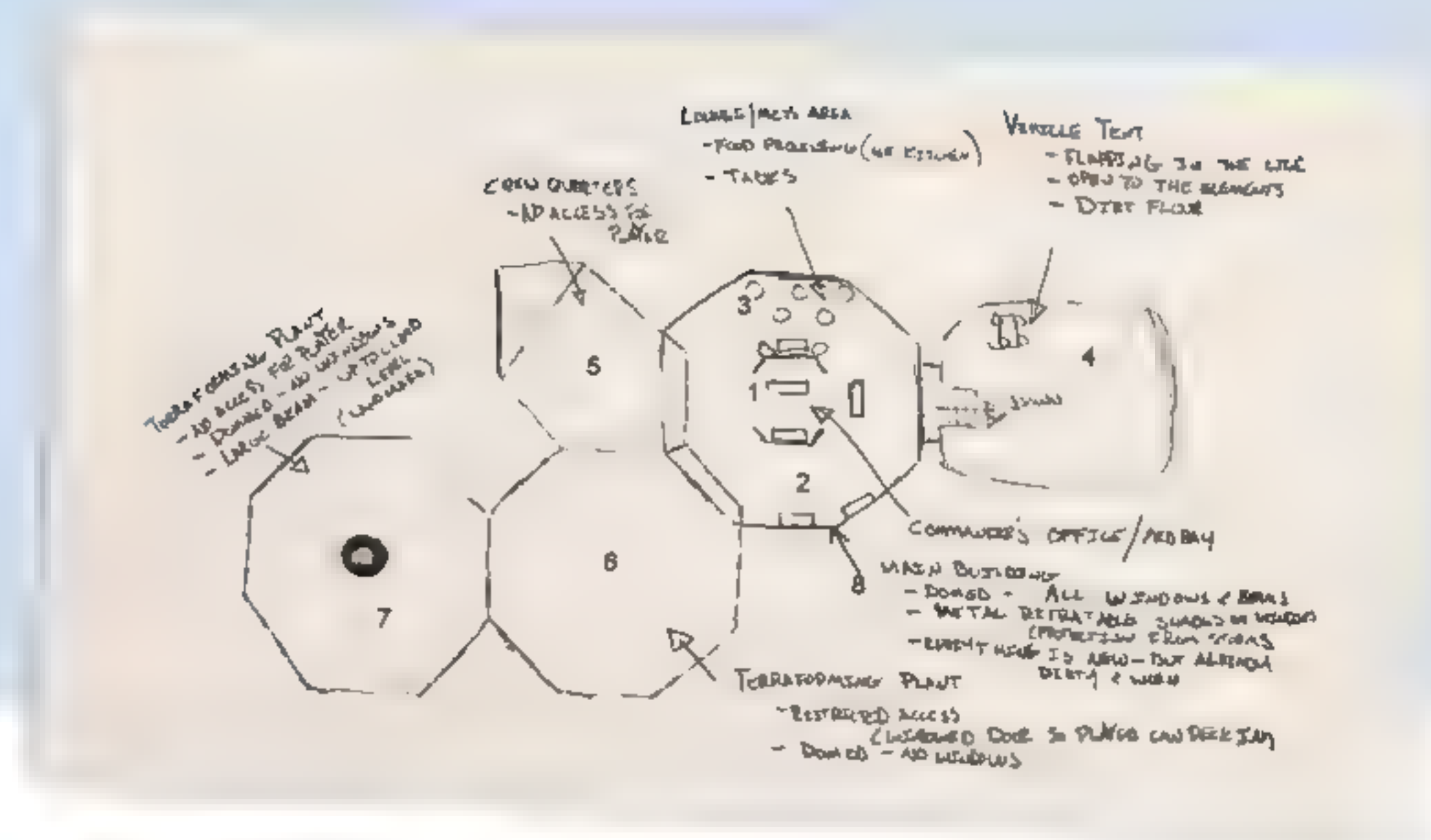




## CERBERUS'S MISERY OUTPOST

CERBERUS ORIGINALLY HAD a larger role in the first *Mass Effect*. Before it was cut, players could explore an entire outpost dedicated to the pro-human faction.

"I called it Misery," says Mac Walters, a writer on *Mass Effect*. "It was this planet with a little outpost that said, 'Welcome to Misery.'"



## THE REAPER SOUND IS LITERAL GARBAGE

SOUND DESIGNERS FOUND THE SIGNATURE CRY OF MASS EFFECT'S ICONIC ENEMIES IN THE WOODS OUTSIDE EDMONTON—THEN THE COPS SHOWED UP

BIOWARE'S AUDIO TEAMS take regular field trips with microphones and recording equipment to capture strange sounds for use in games. Early in *Mass Effect*'s development, three designers—Michael Kent, Steve Sim, and Michael Peter—decided to drive out to Elk Island National Park, a protected forest area about half an hour east of Edmonton, in search of unique clips.

The car they took belonged to Peter, who had recently moved from California to work at BioWare.

Once the trio reached the park, they set off to record anything that sounded remotely interesting.

Kent promptly fixated on a garbage can: a metal bear-proof receptacle with a heavy lid that creaked horribly when opened.

"It was, like, ominous, spooky, tonal, and almost musical," he says. "I decided to throw a mic into the garbage and just record it moving. I didn't know what it was going to be till later."

Kent and the other designers had a lot of fun in the park, driving around in Peter's car with the California plates, looking for more sound to capture.

"We made lots of noise," he admits, "throwing logs around. Rocks. Not doing any damage, just making a lot of noise."

Then they noticed an old camper parked in the woods. There was an old couple inside, looking at them through the window. Frowning.

"Eventually a police car shows up," Kent says. "They pulled us over and said: 'You guys gotta stop doing what you're doing,' which is making tons of noise, disturbing everything. 'And we're towing your car.'"

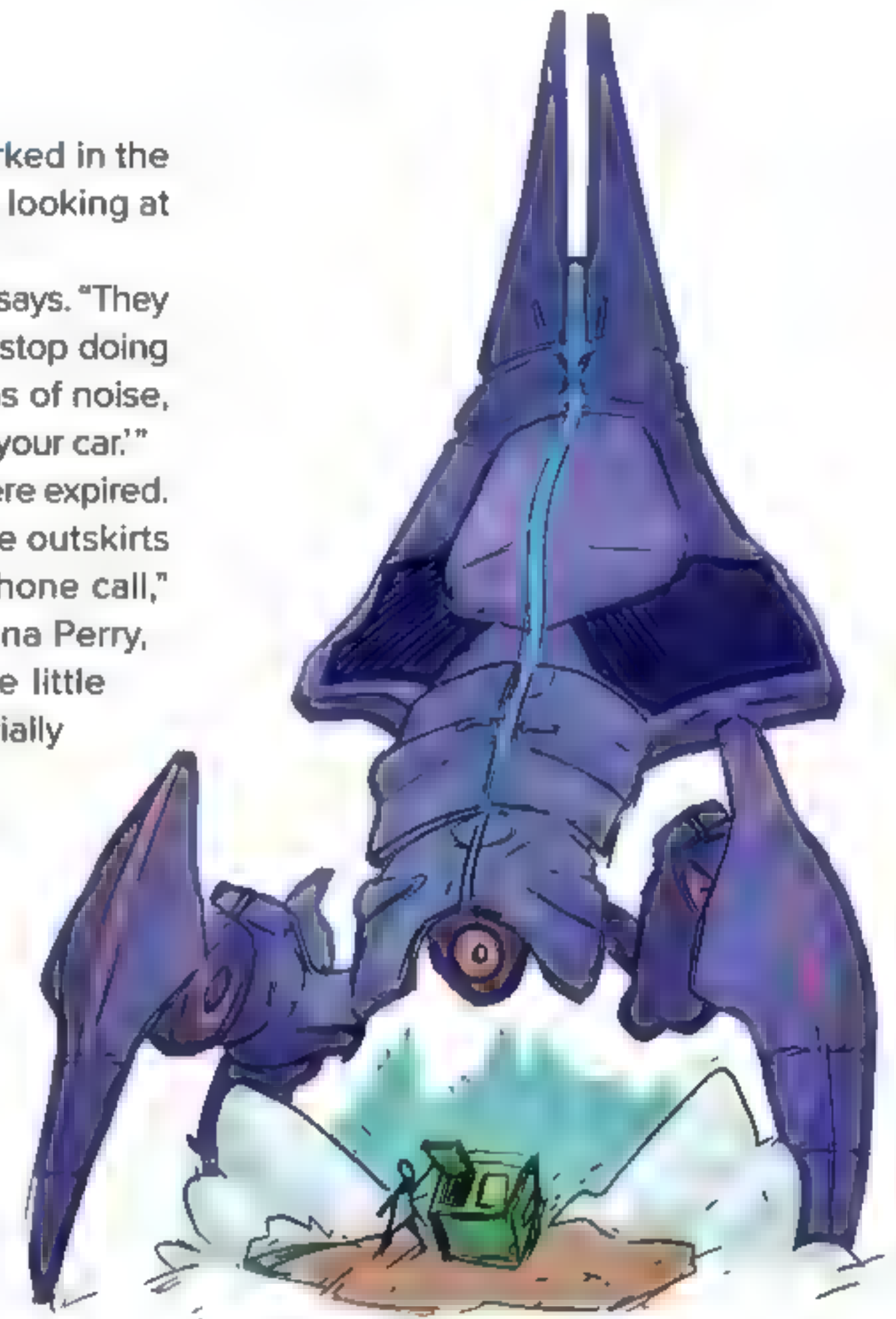
It turned out Peter's California plates were expired.

The cops drove the audio team to the outskirts of Edmonton, "at which point I got a phone call," says *Mass Effect* audio producer Shauna Perry, "and I had to pick them up, like three little boys. With the audio department, especially early on, my role was definitely Mom."

"We got a stern talking-to," Kent says. But it was worth the trouble for that weird garbage-can sound.

"Once we got the sound back, we started playing around with it, pitching it down, and all that stuff."

Then Casey Hudson heard it and proclaimed: "That's the sound of the Reapers." A sound that, in some form or another, has been used in every *Mass Effect* game since.



## REAL TALES OF DEVELOPMENT: THE TROUBLE WITH GETTING TOO GOOD AT YOUR OWN GAME

AS A TEAM OF SPECIALIZED developers builds segments of a massive game like *Mass Effect*, it's up to leadership like lead designer Preston Watamaniuk to shepherd the course of a project as a whole. That means playing the game. A lot. On a game like *Mass Effect*, Preston will play through the entire game for months on end. He did twelve full playthroughs of *Mass Effect 3* and estimates he put at least four hundred hours into *Anthem*.

All that practice will make Preston atypically good at even a game's trickiest gameplay. In the original *Mass Effect*, it's why he got a reputation for being among the best Mako drivers in the galaxy, or at least in the studio:

*The hours that you put into playing the game should be more than anyone else on the team. And the number of bugs that you file should be comparable with some of the best QA on the project...*

*That's why, with the Mako, I was reasonably good at getting around. And there were moments that I remember the QA guys going: "You can't beat Matriarch Benezia on Insanity. She's impossible." So I went in there and I beat her and then I was like: "Yeah, that was too hard. Now, let's make it easier..."*

*Later, with some distance, you realize just how hard it is to critique something when you're living with it. There are things that I could have done to Mass 1 to make it an infinitely better, more playable, more understandable game with better UIs that were simple, and very simple, clean cuts or changes that I could have made. But when you're living with it, it's very hard to see those things.*

*You have to almost get a full game away from something before you can see that.*





## THE MAKING OF

# AGENT

### BIOWARE'S EPISODIC ESPIONAGE RPG ASSASSINATED



#### KEY FACTS AGENT

**RELEASE DATE:**

Unreleased

**GENRE:**

Action RPG

**PLATFORMS:**

Xbox 360, PlayStation 3,  
Windows

Developed in Edmonton

Status: Canceled

BY 2007, BIOWARE HAD DONE fantasy, science fiction, martial arts, and mechs. What it hadn't tried was espionage.

*Agent* was to be BioWare's first foray into the spy genre: an episodic supernatural thriller brimming with memorable characters and plenty of BioWare-style choice and consequence.

"It was that Bondesque fantasy of you in a high-stakes world of violence and action, romance, all those things," says Aaryn Flynn, a programmer on the project. "The spy thriller is a pretty standard narrative conceit. Bringing that to a computer game as a role-playing game was the ambition."

Key to *Agent*'s story were secret societies and powerful people pulling strings behind the scenes to control world events. The player character, recruited to stop these clandestine forces, was aided by superhuman abilities granted to them after an experiment gone awry.

"We wanted to have this male and female team who were both enhanced agents, so stronger and faster than the normal person," project director Trent Oster says.

At the core of the experience was a visceral combat system. The stealth you might expect from a spy game was deemphasized in favor of hand-to-hand combat.

"Instead of a loose fighter, we wanted it to be much more kind of brutal MMA-ish," Trent says. Punches that landed hard. An intimate, tactical experience. If players wanted to choke out a character in a fight, they needed to do the work. "I wanted you to be hammering the button to make this happen."

#### FIVE MINUTES OF GOLD

Cinematics in *Agent* once again aimed to push the limits of what BioWare had done to date. Interrogation gameplay was an early ambition. Players would not only need to choose conversation options to direct the outcome of a conversation, but watch for tells in the faces and body language of characters.

The team built a demo, all conversation mechanics and cinematics, which they dubbed "Five Minutes of Gold." It saw the player strapped to a chair, being interrogated. The catch was the player was trying to extract information out of their interrogator, with their partner monitoring in case things went sideways.

"You've allowed yourself to be captured," Trent says. "The character's strapped into a chair and you're basically answering dialogue and pushing it back and forth. And if you push too far, you're dead. If you don't push far enough, you don't get the answers."

#### ONE TOO MANY PROJECTS

When work on *Agent* began, BioWare was already working on several new IPs, including the first installments of *Mass Effect* and *Dragon Age*, as well as a follow-up to *Jade Empire*, code-named *Revolver*.

"With three other very ambitious titles underway, it was just too much," Aaryn says.

*Revolver* was the first to go.

"Ray got up onstage," Trent remembers, "and he's like, 'I like *Revolver*. I believe in *Revolver*,' which instantly, the question is, like, why would you not? What's going on that you believe in it? Is it something bad here?"

Roughly six months later, *Revolver* was canceled.

Then, a couple of months after that, Ray once again stood in front of the company, this time saying: "I believe in *Agent*."

"And we're like, 'Oh, shit, we're screwed,'" Trent says, "because if Ray believes in us, it means that somebody else doesn't."

*Agent* was reimagined as a smaller game before the project was ultimately canceled. BioWare pooled its resources to instead focus on *Mass Effect* and *Dragon Age*, while Trent founded a new studio called Beamdog with fellow early BioWare developer Cameron Tofer, working out of the old Whyte Avenue studio to release enhanced editions of BioWare classics including *Baldur's Gate* and *Neverwinter Nights*.









## SHOOTING "MOE CAPP"

WHY YOU SHOULD CHOOSE YOUR WORDS CAREFULLY AT BORDER CROSSINGS

IT'S COMMON FOR BioWare devs to field multiple questions from border guards about their work in games (see also Page 079). Pretty much every developer at the studio who has traveled abroad for work has a favorite story about crossing into another country.

Border guards tend to operate with an abundance of caution, and phrasing in these sorts of conversations is key. If asked, an audio artist is carrying a "directional microphone" and not a "shotgun mic."

During one *Mass Effect* motion capture trip to the US, a cinematic animator was stopped at the border because of another particularly poor choice of words.

"He told the border security guy that he was going down to 'shoot mo cap,'" animation and cinematics director Steve Gilmour says.

The border security guy's face went pale before asking something like: "Who the hell is Moe Capp?"

"About an hour and a half later, we finally got on the plane."

## AGENT'S SECRET DOSSIER

DESIGN DOCUMENTS FOR BIOWARE'S CANCELED SPY RPG

INITIAL DESIGN DOCUMENTS FOR *Agent* were drafted by the core team in October 2007. The documents detailed everything from intended gameplay to conversation systems and included core design pillars and main character bios. What follows are highlights from the internal design documents, including the original game logo and a high-level summary of the game's vision, known at BioWare as a "razor."

*Right:* Cover page for the thirty-nine-page confidential design document for *Agent*, which was canceled the following year. *Top, opposite page:* *Agent*'s razor summarized the game's core vision so everyone on the team knew what game they were working to create.

*Bottom left, opposite page:* The main characters of *Agent* were a man and a woman inspired by Mulder and Scully of *X-Files* fame.

*Bottom right, opposite page:* The *Agent* team sought to expand and innovate on BioWare's conversation systems to allow for a greater degree of complexity, treating conversations like "tactical gameplay."

# AGENT

Design Overview Document / October 2007 / Version 1.0

[Note: This is a first pass to define a direction for the design, this document will be broken into a feature set that will then be for a detailed design, elements WILL be missing.]

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TOP SECRET



## 1.7 Player Character Overview

The player may select his avatar from two defined iconic characters, a man-woman partnership like Mulder and Scully in *The X-Files*. Each character is unique, with a strong personality, a detailed history, and individual strengths, weakness, seduction methods and fighting styles.

### 1.7.1 Character choice

The player will pick one of two iconic characters at the start of the Pilot episode, through the in-game contrivance of having the Magister spying on and discussing the suitability of each character for recruitment. There will be no separate GJI, we are not implementing a "create-a-character" or "customization of player character face" feature.

### 1.7.2 Player Characters

Agent Rick Durant is honest and loyal, as well as independently wealthy. He wants to serve his country and help those less fortunate. He has many government and upper-class contacts. He has had few serious relationships, but his many trysts were more fun and casual than manipulative or cruel.

Agent Kira Lyons is a chameleon, able to turn herself almost instantly into whatever the situation calls for. She is by turns charming and ruthless, guarding her true self behind such tight controls that even she rarely peeks inside. Her morals are similarly situational — she's seen a lot of the rougher side of life, and doesn't flinch from doing something difficult or even brutal. She has many contacts in the underworld, from crime families to terrorists.

### 1.7.3 Character names

After selecting the agent, a player can define their character's first name, or keep the default PC names. However, the characters' code names will be predefined so dialogue can refer to the player.

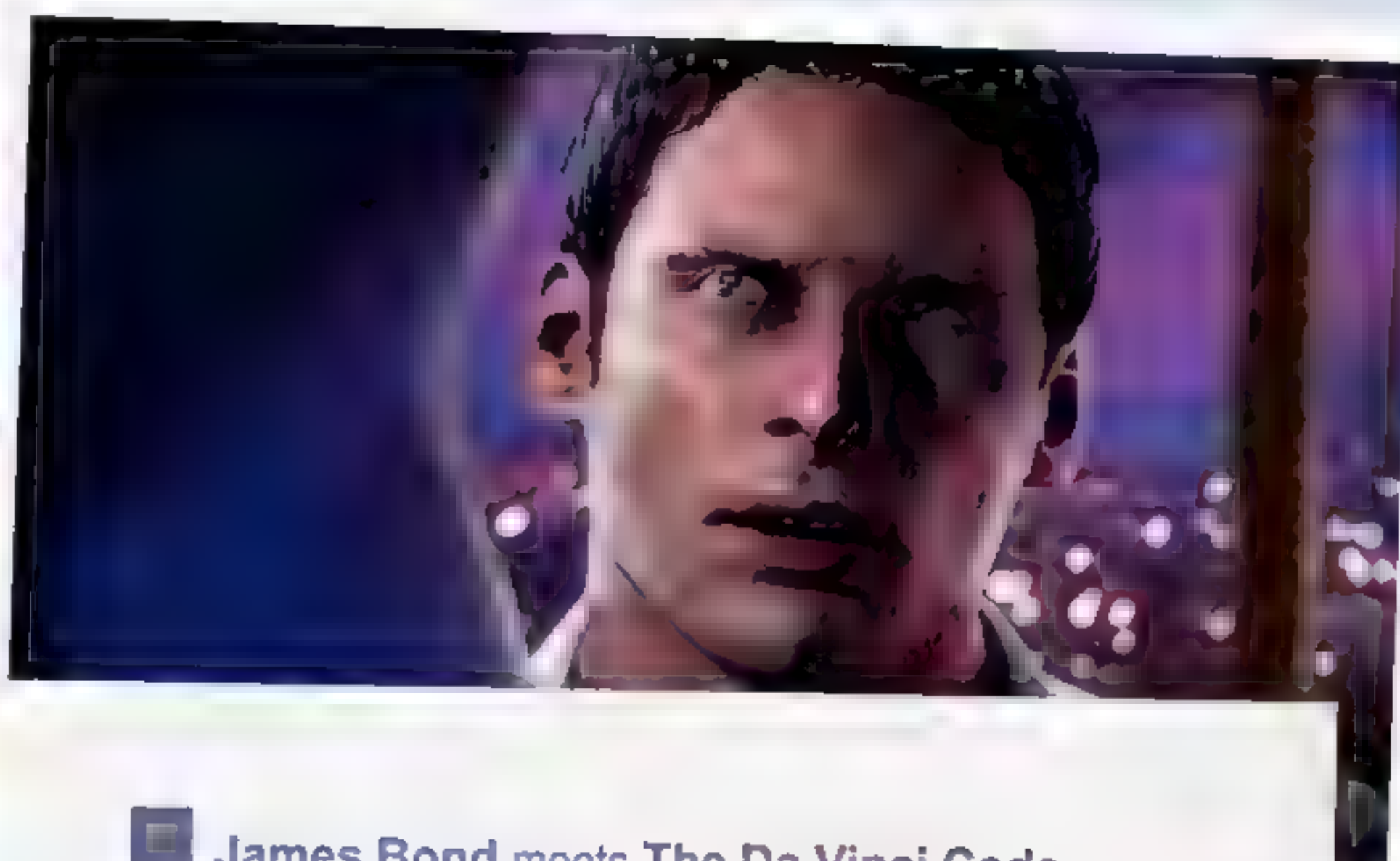
### 1.7.4 Character Overdrive

Overdrive is the result of traumatic experiments carried out on Durant and Lyons on a genetic level. The player will experience Overdrive as a permanent enhancement that evolves along with the player as the season unfolds. Overdrive also provides a partial safety net for newer players.

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46



## James Bond meets The Da Vinci Code

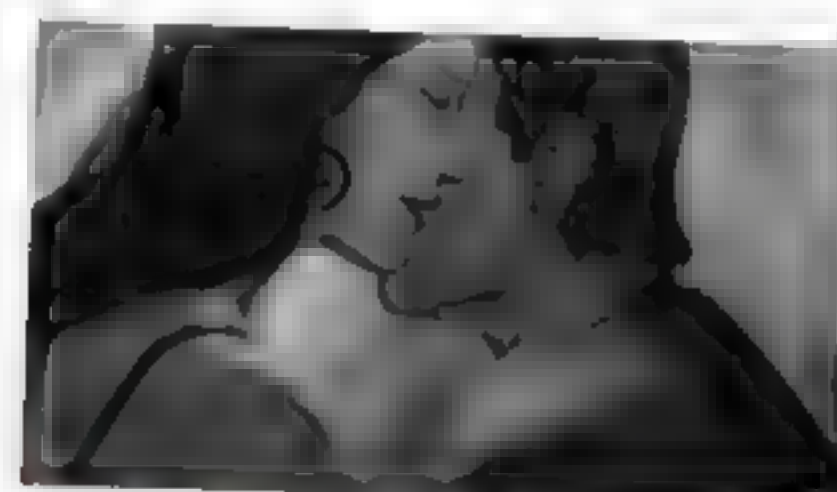
Victim of a hideous experiment which left you with a drive beyond normal human abilities, you are recruited to defend a world in which conspiracies ancient and modern lurk behind even the most innocent facades.

You are one of two agents — partners, friends, some-time adversaries, or lovers, you are two halves of one whole. You begin as strangers, a CIA commando and an undercover operative for MI6. But when a mission to stop a terrorist brings you into conflict, you are thrown together on the run for your lives.

Only one hand reaches out to you — the Guardian — voice of the mysterious council of scientists who call themselves the Magister, an Illuminati-like group which has appointed itself the world's guardian angels, opposing the conspiracies and cults which have a stranglehold on history. They want you as their vanguard in a battle no one has ever won.

You uncover a plot of apocalyptic proportions as you learn that the insidious Progenitors have infiltrated the highest levels of government in their plan to breed a master race, a race they intend as humanity's replacement. It will take all of your skills as an agent to track, seduce and battle your way into the inner workings of a conspiracy that has spanned centuries, before they release their tailored super virus.

Racing to save the world, you learn to your horror that you are one of the chosen — your entire life, your family, and most of all, the powers that set you apart as an agent, all live your worst enemy. You must decide, to end their reign of terror, can you risk never learning who you truly are?



## 1.9 Conversation

As an agent, your goal is often to obtain information, and in those cases, conversation and the art of manipulation are as important for success as your license to kill. You will convince, seduce, intimidate and outright lie to achieve your mission... and always do it with style.

Our goal is to provide tactical gameplay during dialogue by treating conversations the same way we treat the systems behind fighting. Players will approach most conversations with a goal — whether it's the location of a terrorist base or a romantic dinner — and the choices during dialogue allow him to "win" or "lose" that goal, rather than simply letting the dialogue unfold without consequences.

- **Relevant Lines** - The player will not choose from lists of subjects or dialogue options; an agent knows what he wants to talk about, so all dialogue options will be relevant and limited to choices which allow success, failure and meaningful tactics.
  - o Dialogue choices are less about subject (i.e. "I'd like to ask more about your country now..."), and more about how you ask the question (i.e. "I love the French countryside, don't you?" vs. "What a dump. We should have let the Germans keep it.")
  - o Multiple subject branches will provide tactical options to misdirect, compliment, intimidate or unbalance an NPC during a conversation.
  - o Conversations are always written with a style and one-up-manship which empowers the player's fantasy of being an agent.
- **Realistic Dialogue Flow** - Agent's dialogue will have the feel of real conversation, with NPCs sometimes reacting if players take too long to select a response; in some situations, not saying a line can change a situation more than speaking.
  - o Players will have the option in dialogue to remain silent or cut off an NPC mid-sentence.
  - o Players can control the flow of the conversation by changing subjects instead of only reacting to NPC lines.
- **Mixing Talk and Actions** - In tactical conversation, players can manipulate NPCs with actions as well as words.
  - o The player will have the opportunity to perform actions such as leaning in close to enhance a seduction.
  - o Actions are not always available during a conversation, and players will have a limited window to select them.
  - o All available actions are relevant to tactics in the conversation.

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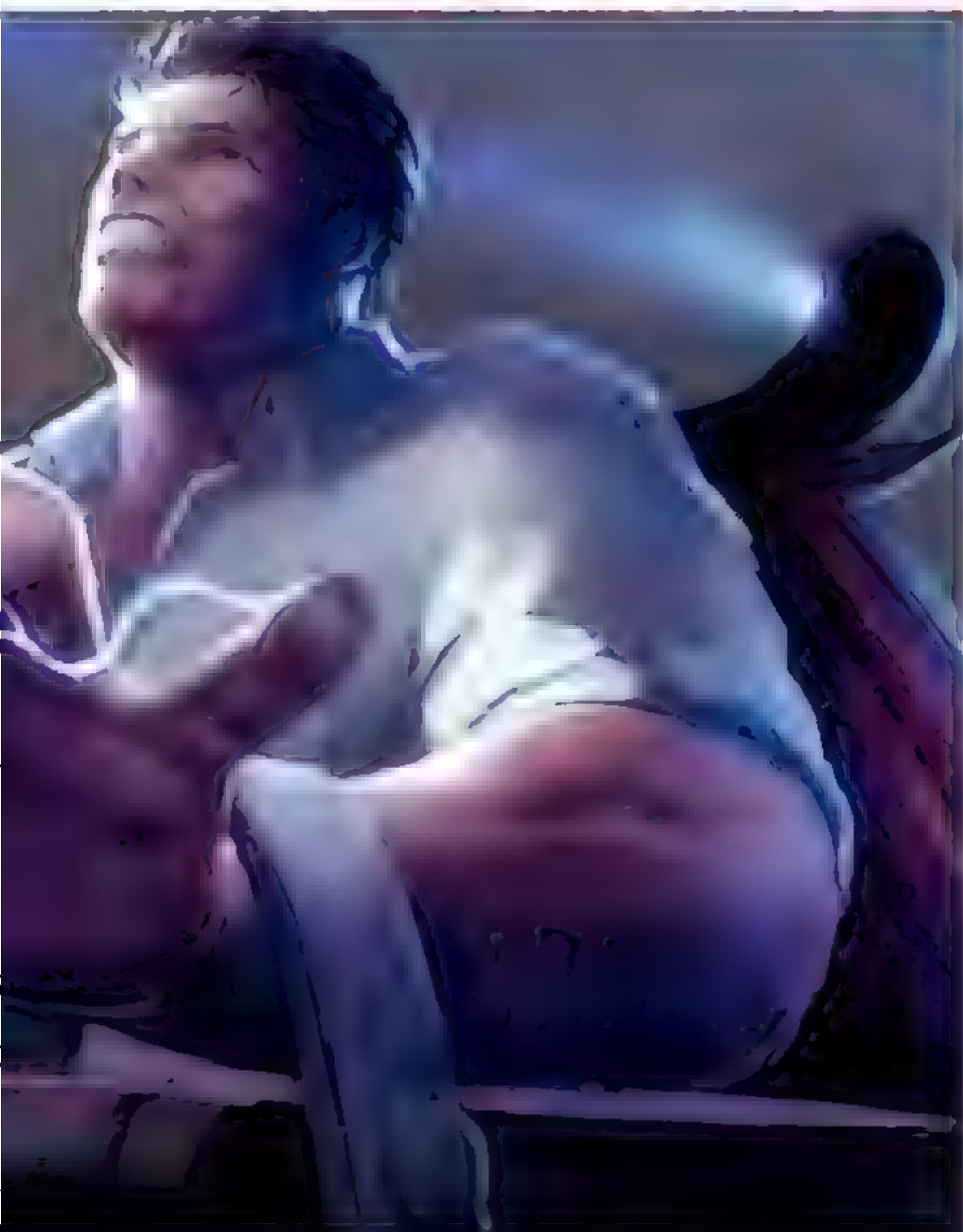
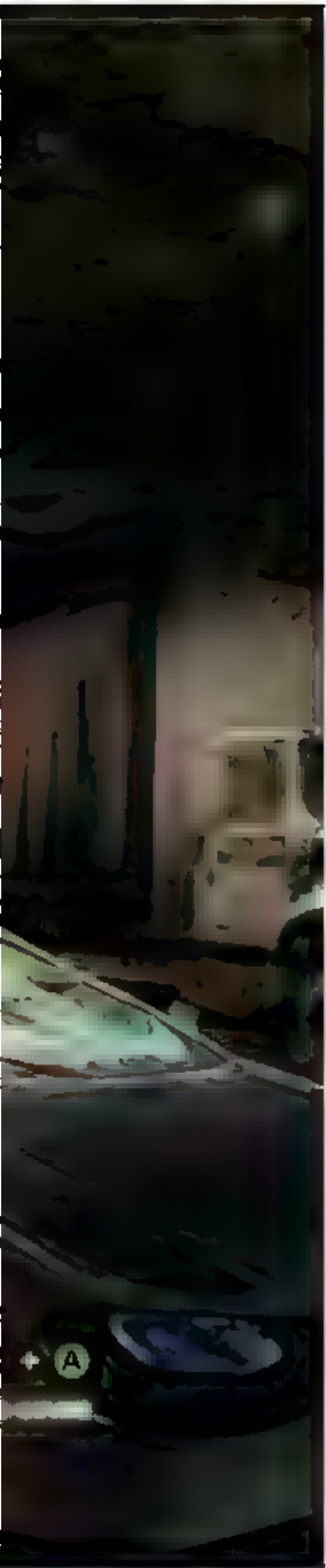
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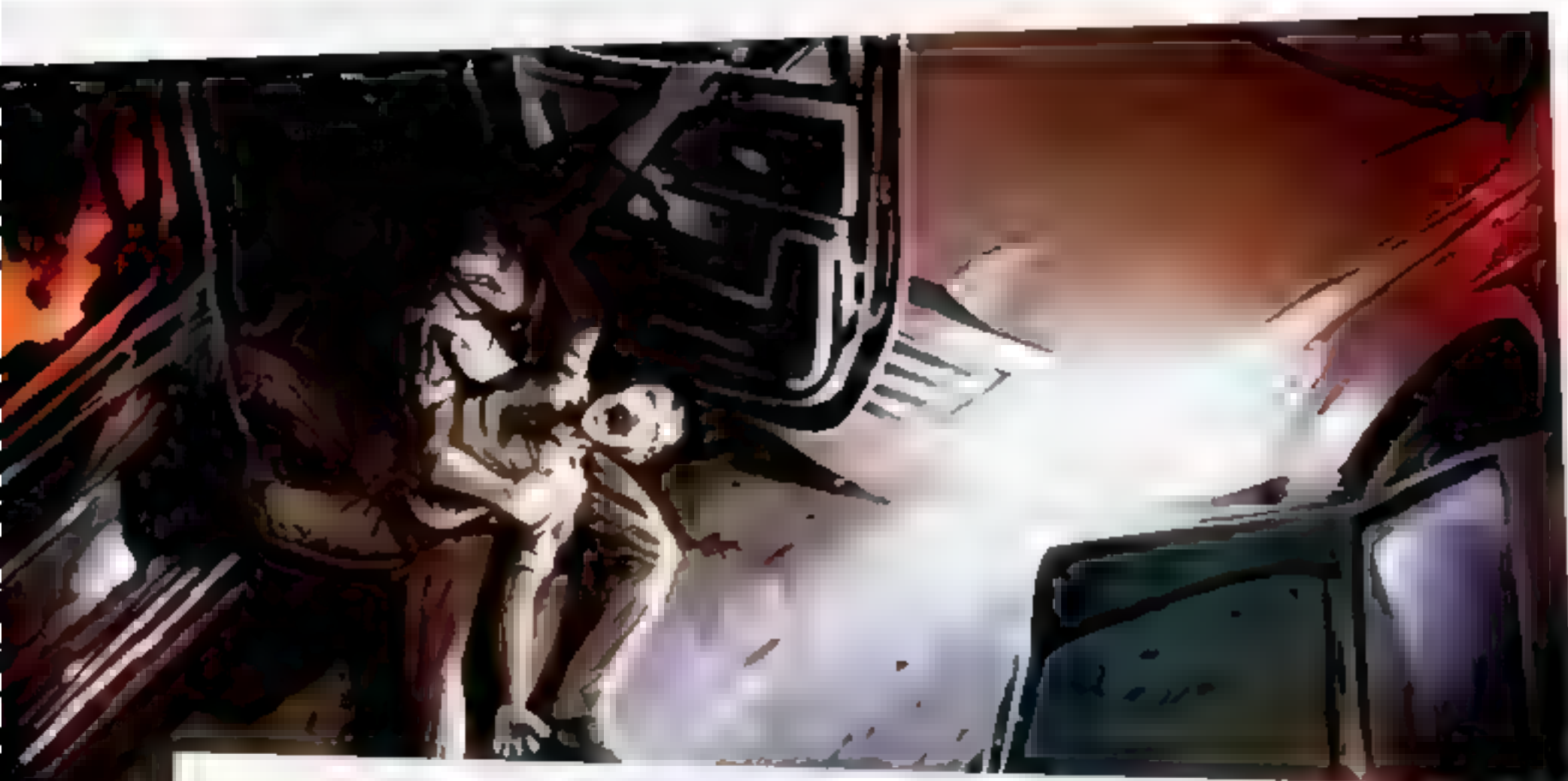












Agent's characters lived in the real world—or something closer to the real world than any other BioWare game to date. But that didn't make the cast anywhere close to typical. Even a simple suit could tell a story, right down to its wrinkles and how it fit.



## PREVIOUSLY ON AGENT . . .

AGENT'S STORY CHANGED BASED ON REAL-TIME PLAYER CHOICES AND FEEDBACK

**INSTEAD OF A FULL-PRICE GAME** complete in box, *Agent* was pitched as an episodic experience, to be consumed like a TV show, with new episodes downloaded in a regular schedule online.

"You would go and you would get the first episode of the game. You would play it. And then a week would pass, and we'd release the new episode," project director Trent Oster says. "The plan was to essentially author an entire episode, complete with some branching points in there, and then release them on a weekly cadence."

Branching points in the story would include some major choices, similar to those found in other BioWare games. The catch with *Agent* was players would vote on what they wanted to see happen. The winning choice would play out in the subsequent episode. Trent uses the example of a raid on a night-

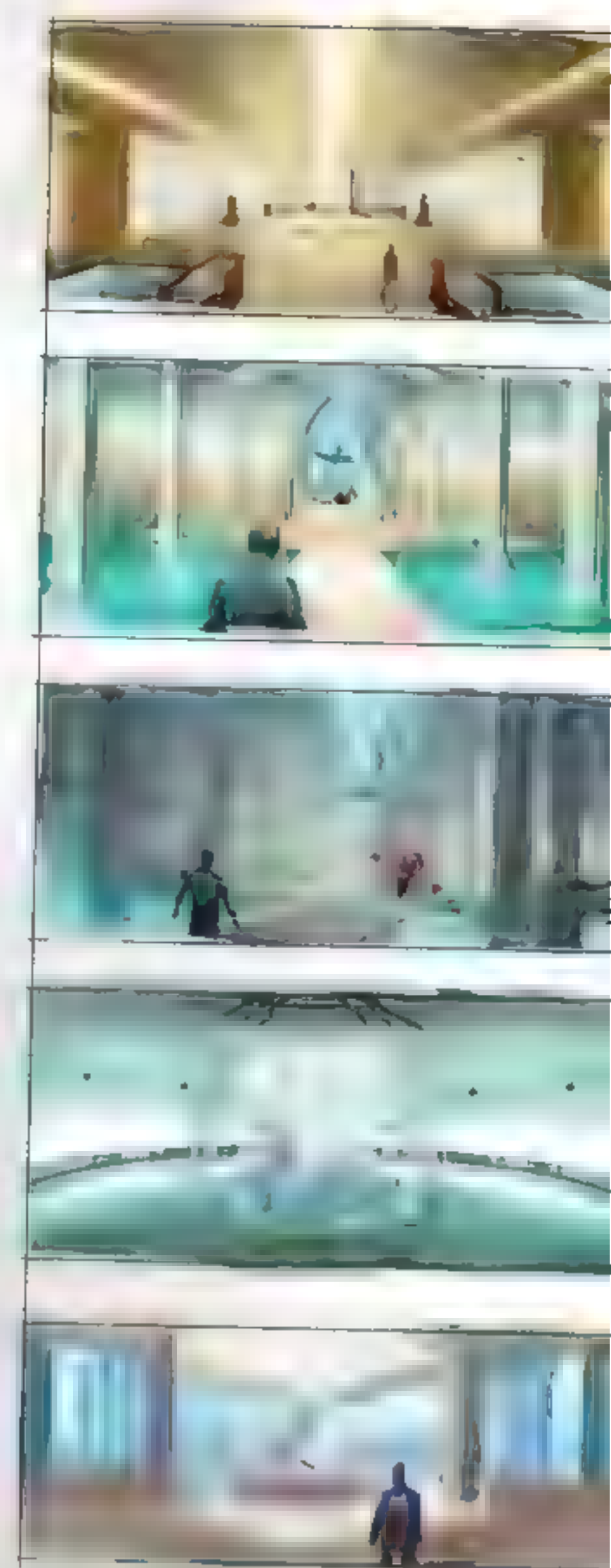
club. Players would be able to deploy one of three assets to help them get in: an attack helicopter, a SWAT team, or snipers.

"By having a copy of the game, you were allowed to vote," Trent says. "We'd tabulate the votes, with all three options programmed into the game."

When the next episode launched, players would experience the path chosen by the community. The other paths would then be made available to players, so they could see what could have been if things played out differently.

"At the end of the day, I don't know if it would have been feasible," *Agent*'s technical director, Janice Thoms, says.

"We literally wanted to have content done every week or two, and that speed of development was not something we could do. Even now."

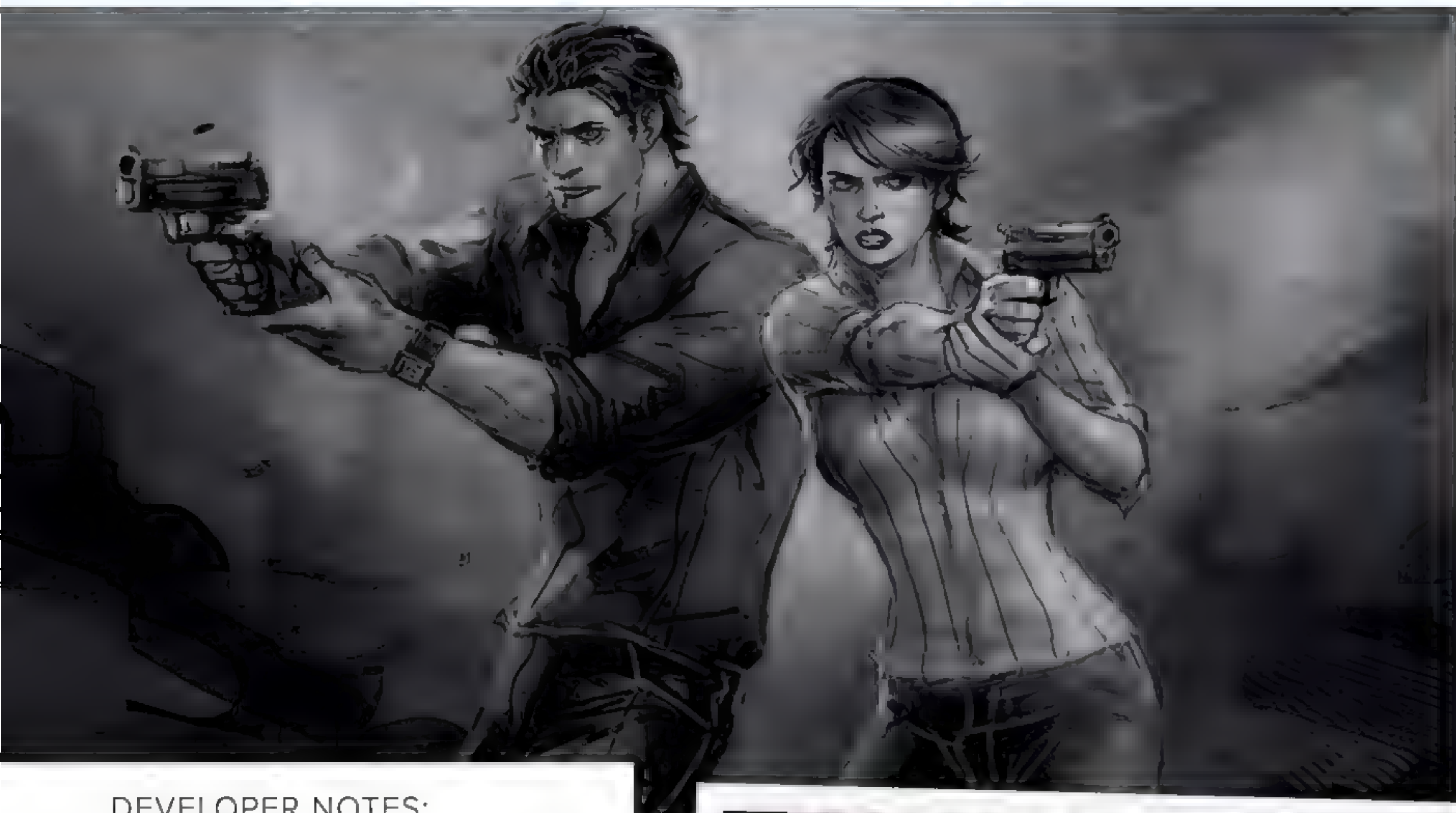


## BIO-TRIVIA AGENT WORKED ON AN MP3 PLAYER

When BioWare first pitched the idea for *Agent*, the game featured a unique feature: a built-in MP3 player. At the time, the MP3 player was a relatively new concept, and BioWare was looking for a way to integrate it into the game. The idea was to have a built-in MP3 player that would allow players to listen to music while playing the game.

Initially, the game was designed to play video clips, but you could also listen to music and download it. *Agent* programmer Andy Flynn says, "We thought, 'You know, this was a new way to do things, and we wanted to see if we could do anything with it.'"

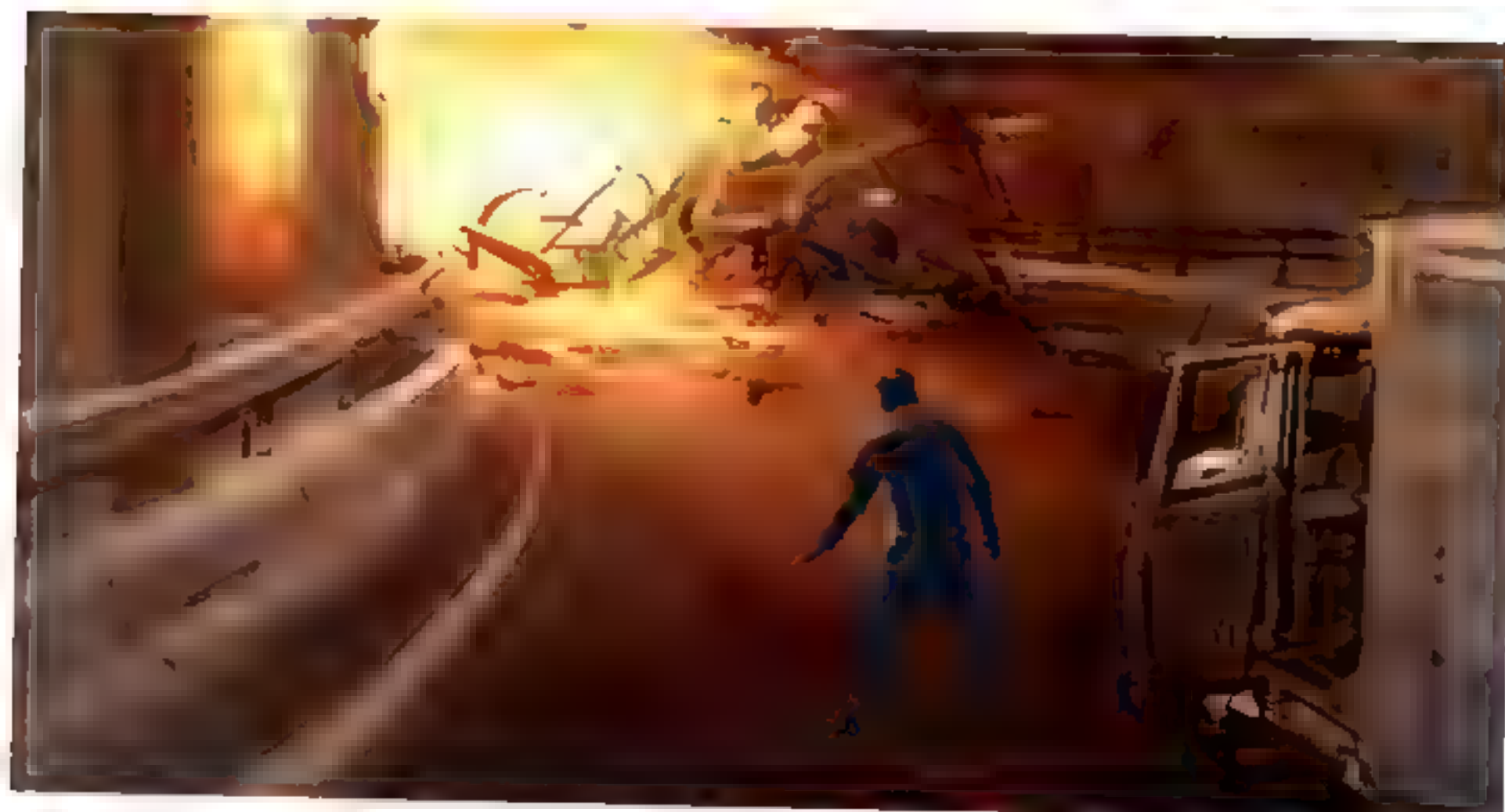




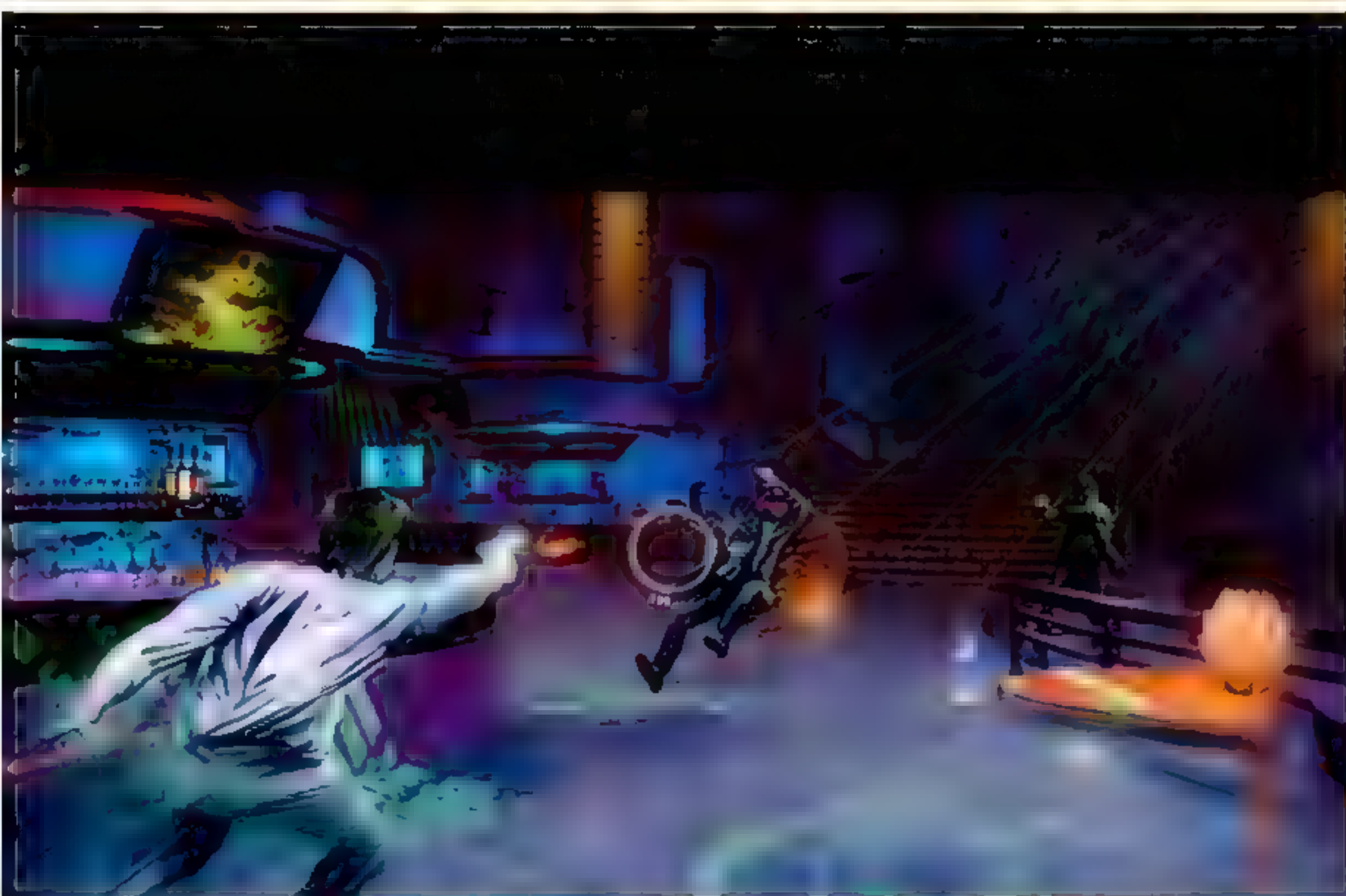
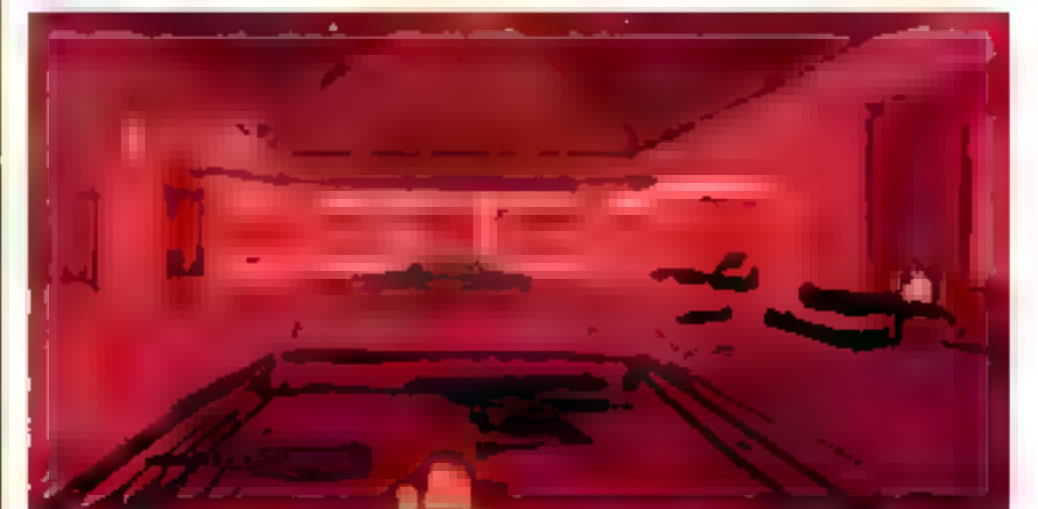
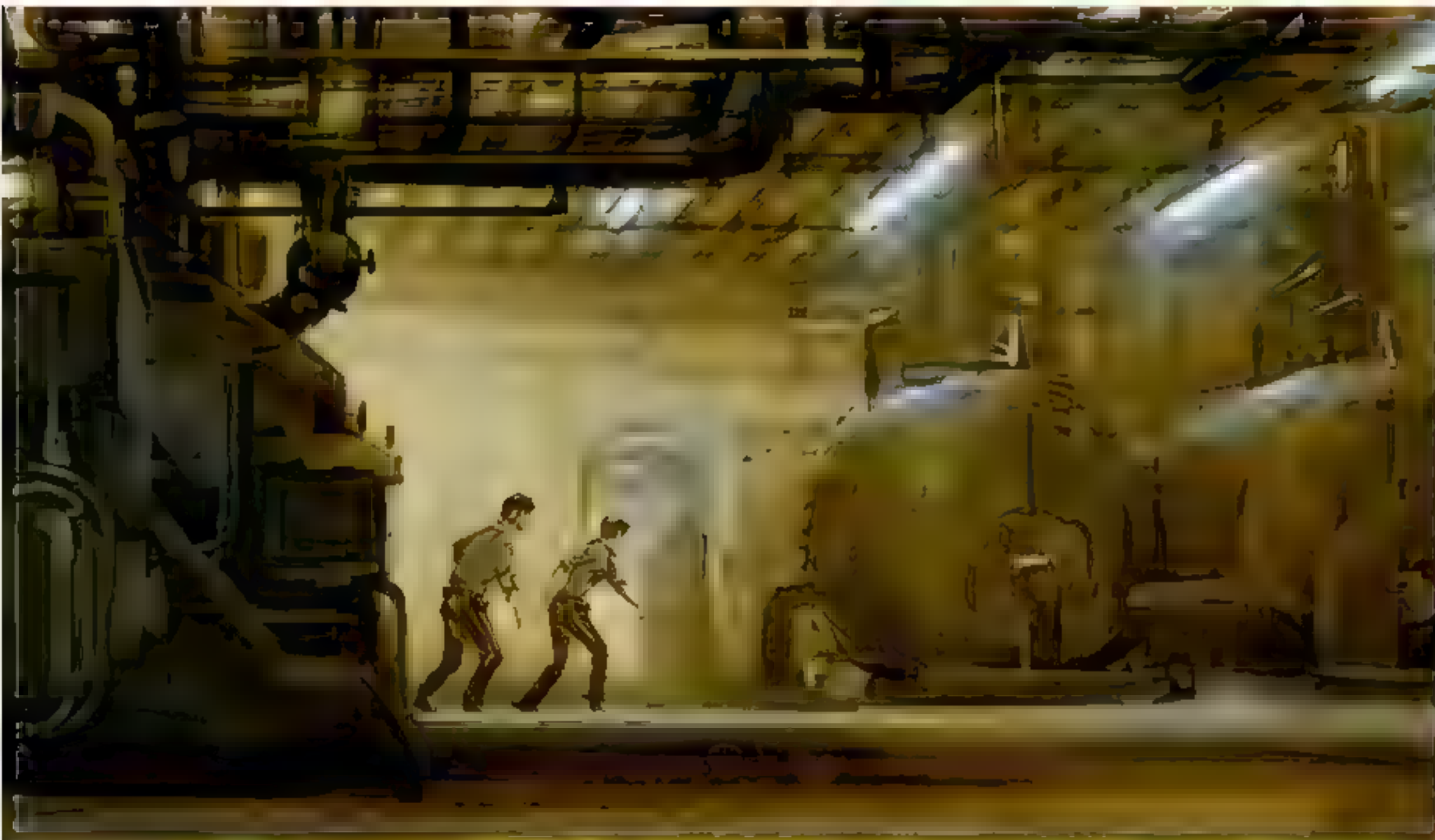
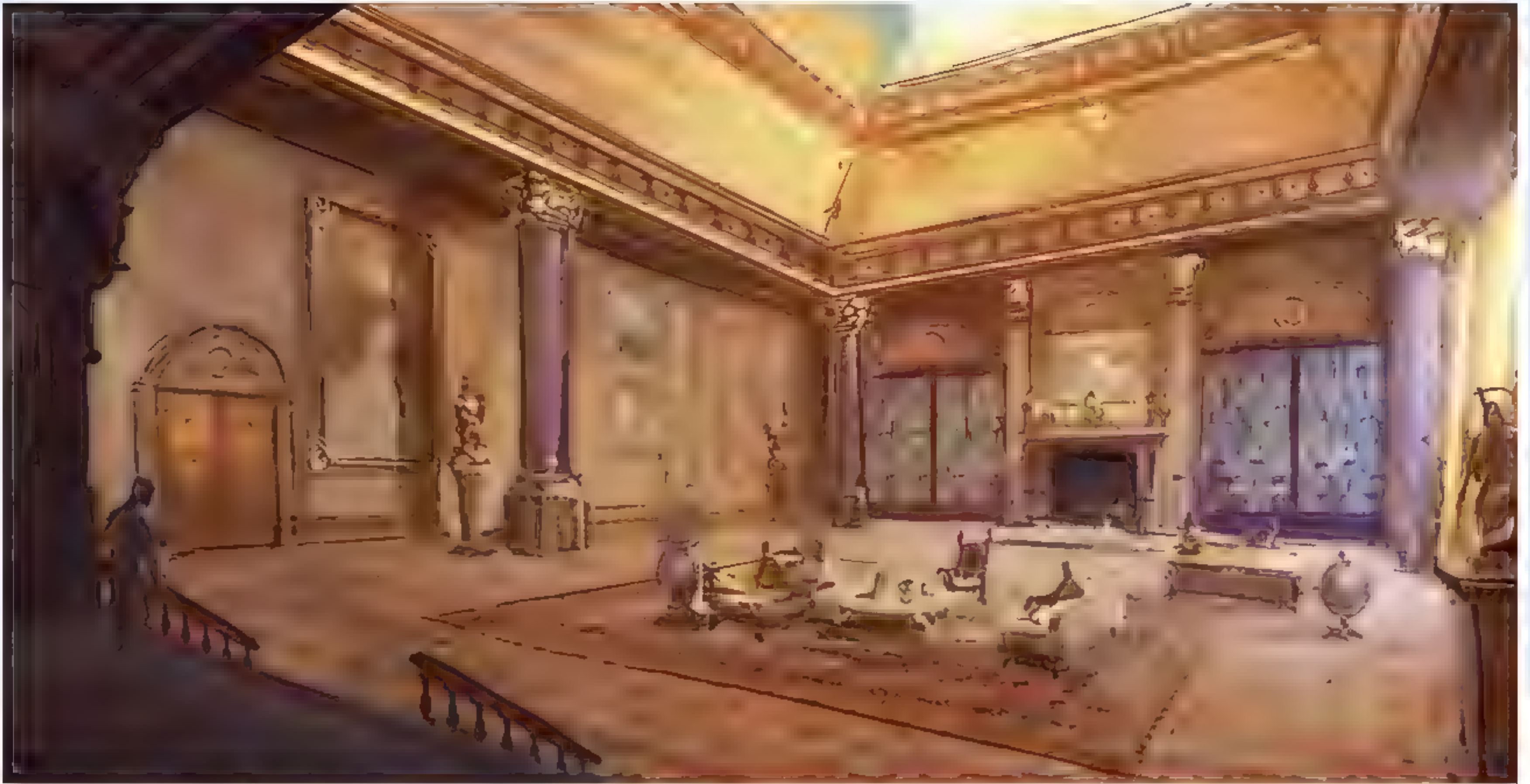
## DEVELOPER NOTES: **AGENT IS NOT**

**WHEN DESIGNING A GAME**, it's helpful to define what your game is not. This helps keep the team focused on what it can be. Taken directly from *Agent's* initial design documents, here is what the canceled game was not going to be:

- Not a sand box game. You are not expected to create your own fun.
- Not a turn-based game. Combat and actions will happen in real time.
- Not a first-person shooter. We are not competing with first-person shooters. Combat will be more intimate in nature, with a higher percentage of hand-to-hand fighting.
- Not a graphic novel. The dialogue will not require hours of reading; dialogue will be short and snappy, in the style of the best prime-time television.
- Not an RPG. The player will not be exposed to stats, character classes and experience points. Character development will focus on helping the player be a better spy.

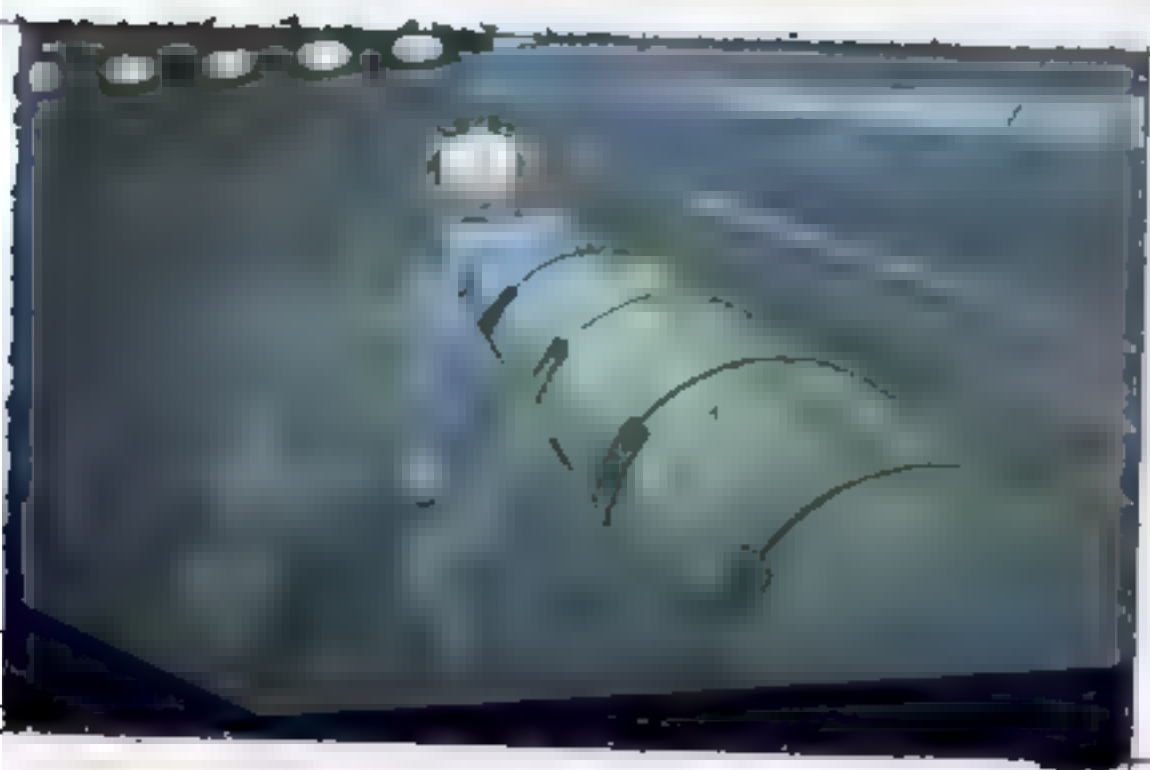
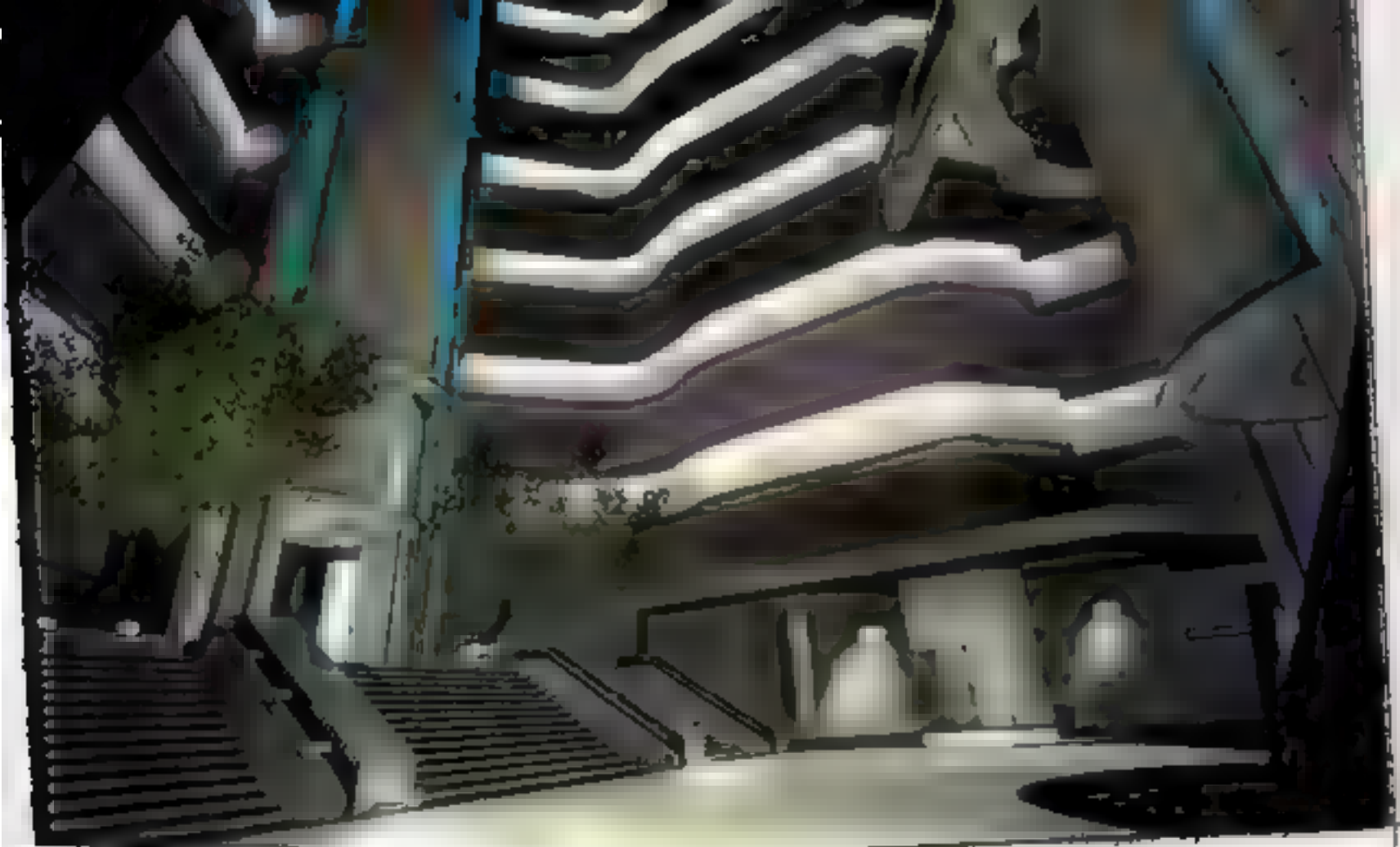






Working with the spy theme, the crew for Agent would have transported players to a host of settings, from a London pub to a high-tech laboratory, and other classic settings for spy, all with a BioWare twist.





## THE BIOWARE LABS EXPERIMENT

BIOWARE'S SMALL-GAMES GROUP THOUGHT BIG

AS THE POPULARITY OF social media and smart-phones exploded, BioWare assembled a small team dedicated to exploring opportunities on these emerging platforms.

Working out of Edmonton as BioWare Labs, the small-games group of developers released a *Mass Effect* mobile tie-in and a Facebook game about a yeti in the span of six months.

### MASS EFFECT GALAXY

BioWare introduced Citadel politics and galactic unrest to iOS on June 22, 2009, with *Mass Effect Galaxy*, a top-down shooter featuring branching dialogue and RPG elements.

*Galaxy* used a unique graphic art style and static image presentation common in visual novels. Players took control of *Mass Effect 2* squad mate Jacob Taylor in a prequel story that saw Jacob stopping a batarian extremist plot.

The game also featured *ME2* squad mate Miranda Lawson as a nonplayable ally.

*Mass Effect Galaxy* was the first BioWare game made for iOS. Other iOS apps using BioWare properties were later developed by other EA studios, including the turn-based casual RPG *Heroes of Dragon Age*. But *Galaxy* holds the distinction of being the only iOS game made at BioWare during its first twenty-five years.

### GIFT OF THE YETI

After *Galaxy*, BioWare Labs set its sights on social media, releasing *Gift of the Yeti* just in time for Christmas 2009. The free casual game featured a story line that revealed itself like an advent calendar. Players took control of a yeti filling in at Christmas by delivering presents for a sick Santa. The game was

released during the holiday season to help raise money for Child's Play, a charity that provides video games and toys for sick kids in hospitals around the world.

Upon its release, BioWare cofounder Ray Muzyka called *Gift of the Yeti* "BioWare's digital holiday card to its fans."

### GIFTS GO ELSEWHERE

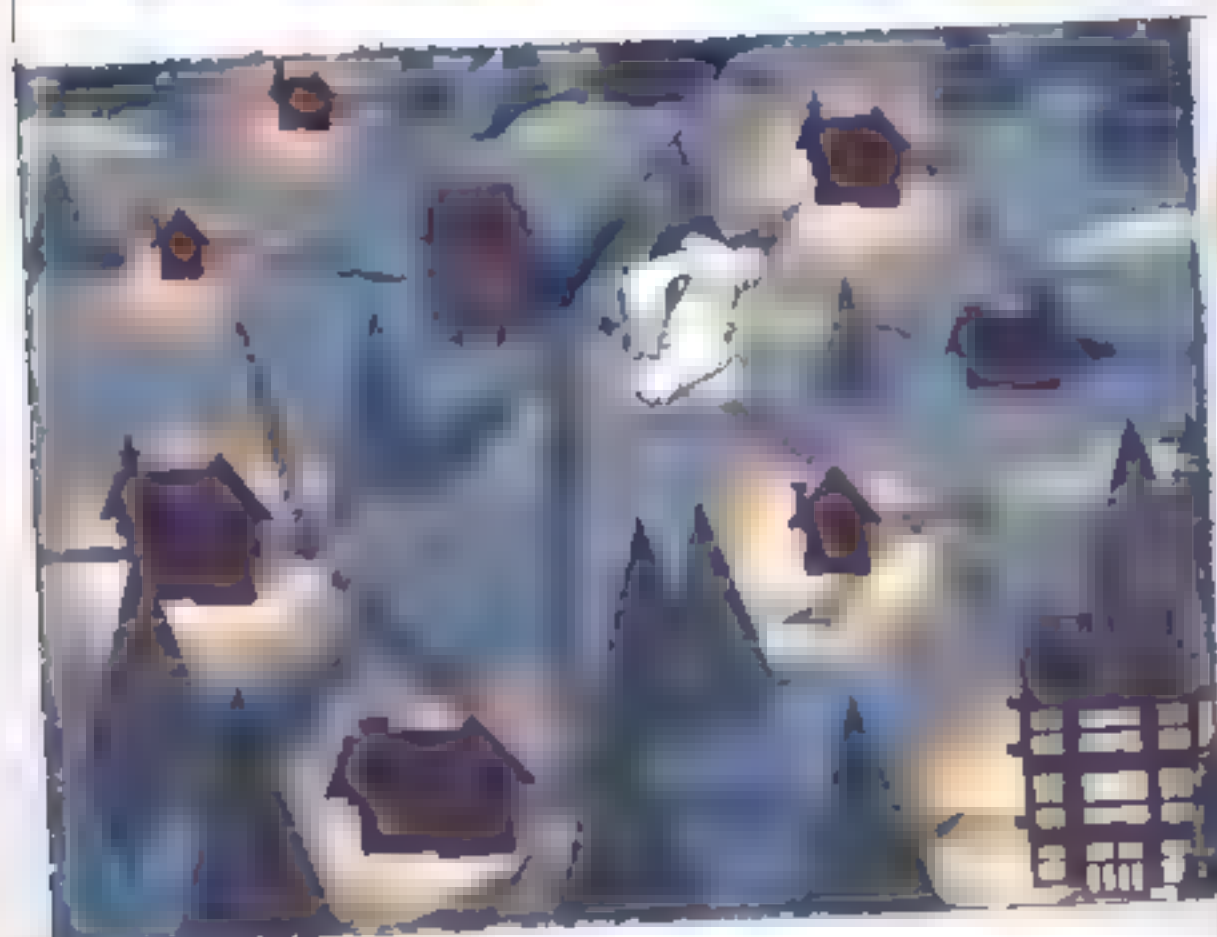
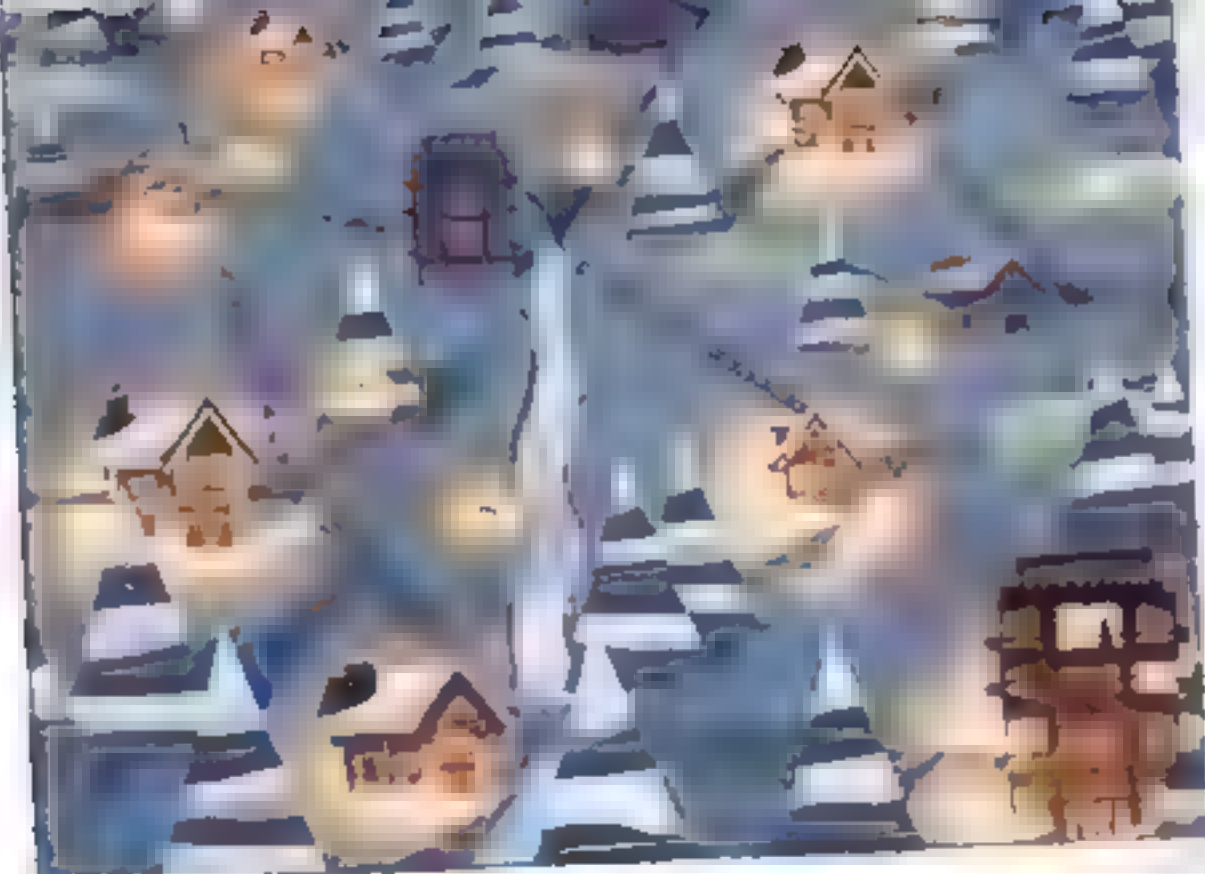
BioWare Labs' research and development continued after *Gift of the Yeti*, but no other releases made it past pitch or preproduction. Among the ideas scrapped included a third-person space shooter called *Mass Effect: Corsair* and two *Dragon Age* titles: a strategy game and a top-down dungeon crawler starring a young Wynne from *Origins*.

"We did a bunch of brainstorming," then technical director Janice Thoms says. "We came up with a few proposals that we put in front of Ray and Greg. None of them ever really turned into anything."

Eventually, BioWare Labs disbanded, with some of the team moving on to larger projects in Edmonton and others heading east to help grow BioWare's fledgling Montreal studio.







## THE BIOWARE DRESS CODE

T-SHIRT, NO SHOES, AT YOUR SERVICE

GAME STUDIOS TEND TO have a reputation for a somewhat lax dress code. T-shirts. Hoodies. Jeans . . . What would be Casual Friday fare at more traditional offices is an unofficial uniform for game developers.

BioWare has long prided itself on measuring workers by the quality of their work rather than the cut of their clothing, a tradition that can be traced back to Dr. Greg Zeschuk. The cofounder was notoriously casual in the office, especially in the early days.

"The first time I met him, he had longer, like, kind of chest-length hair, and I remember him having a Fu Manchu mustache. And he had a T-shirt and shorts on and no shoes. And he walked up to me and I'm like: 'Who the fuck is this guy?'" animator Steve Gilmour says. "And then he started talking, and it's like, oh, this guy's a genius."

Programmer Owen Borstad remembers worrying he'd dressed too casually when he interviewed for his job at BioWare Edmonton.

"A bunch of people showed up for the interview on that day. I showed up dressed in casual wear,"

Owen says, as did his friend Ross Gardner, who was also interviewing. "There were three or four other people in full business attire. And they looked at us as we walked in and scoffed, and then both Ross and I were the only ones who got jobs."

Hearing Steve talk about the first time they met, Greg laughs and admits it's a fair description of his general aura during the Whyte Avenue years.

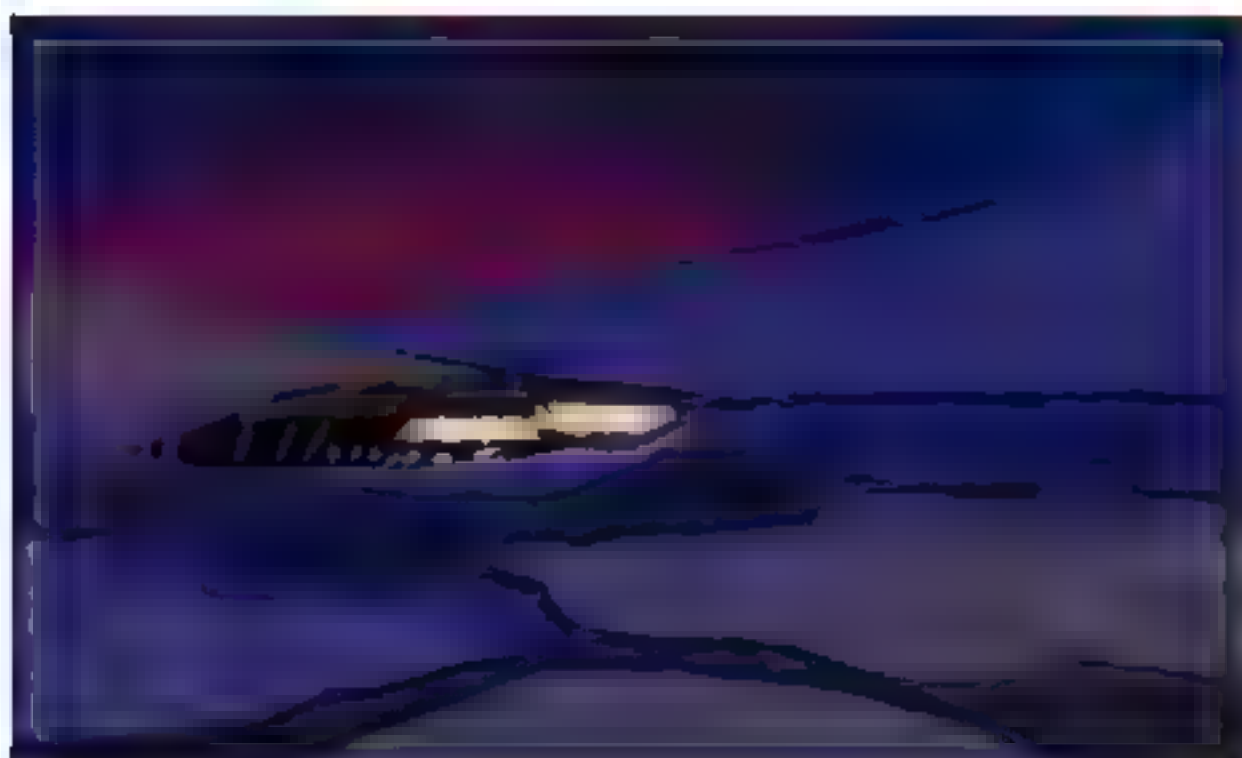
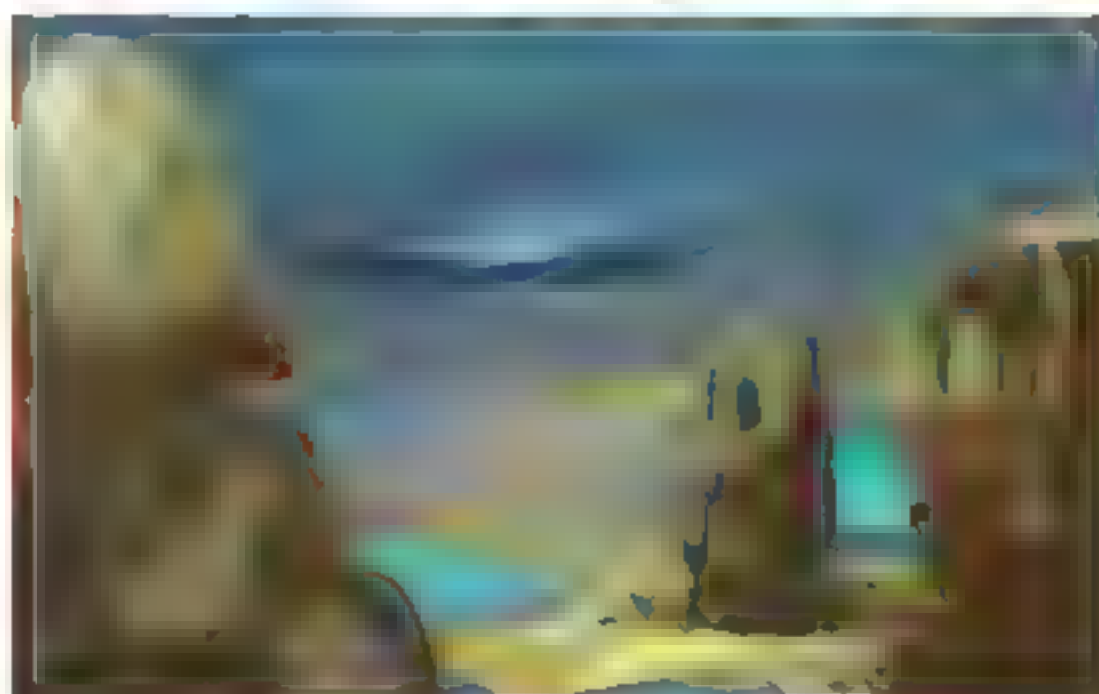
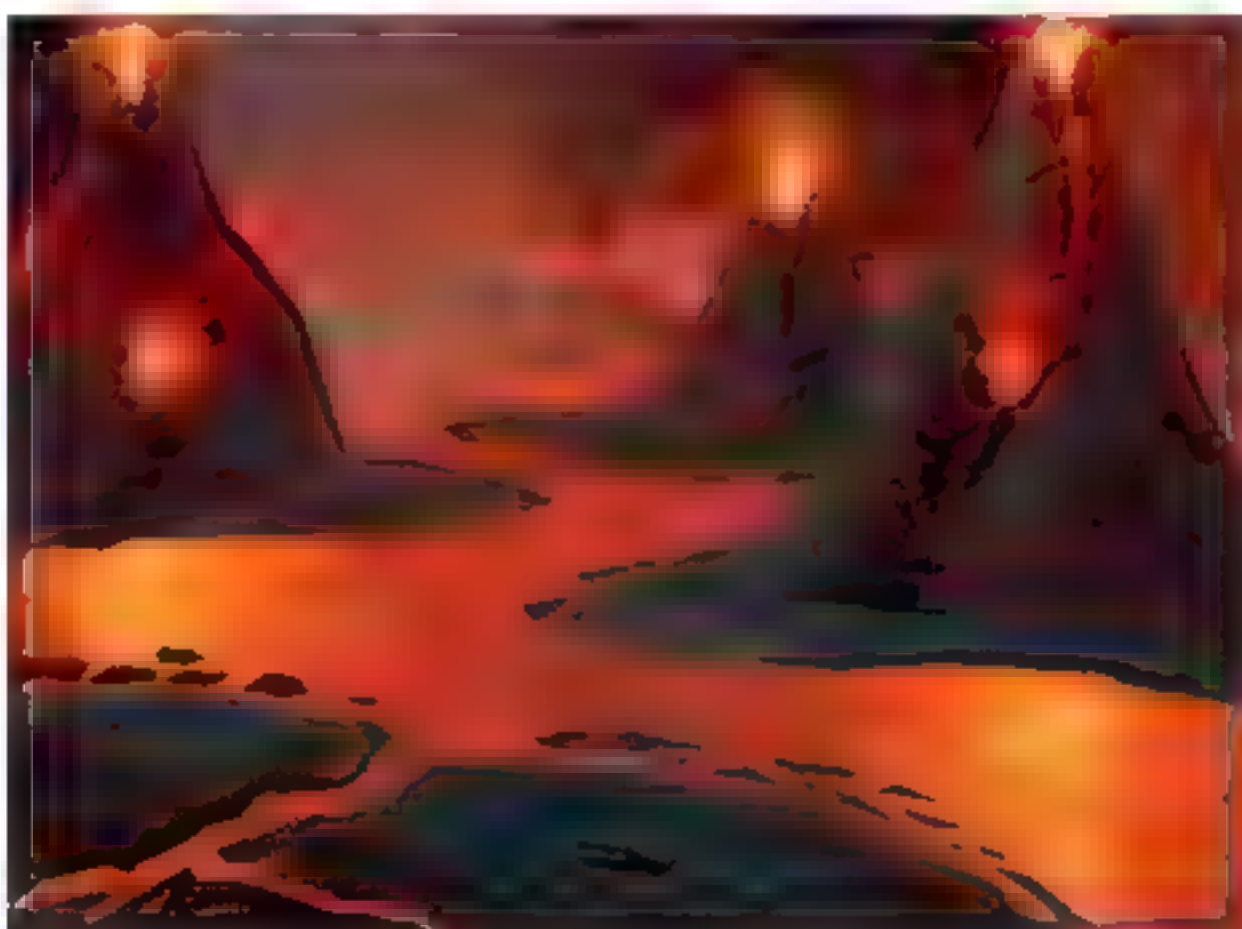
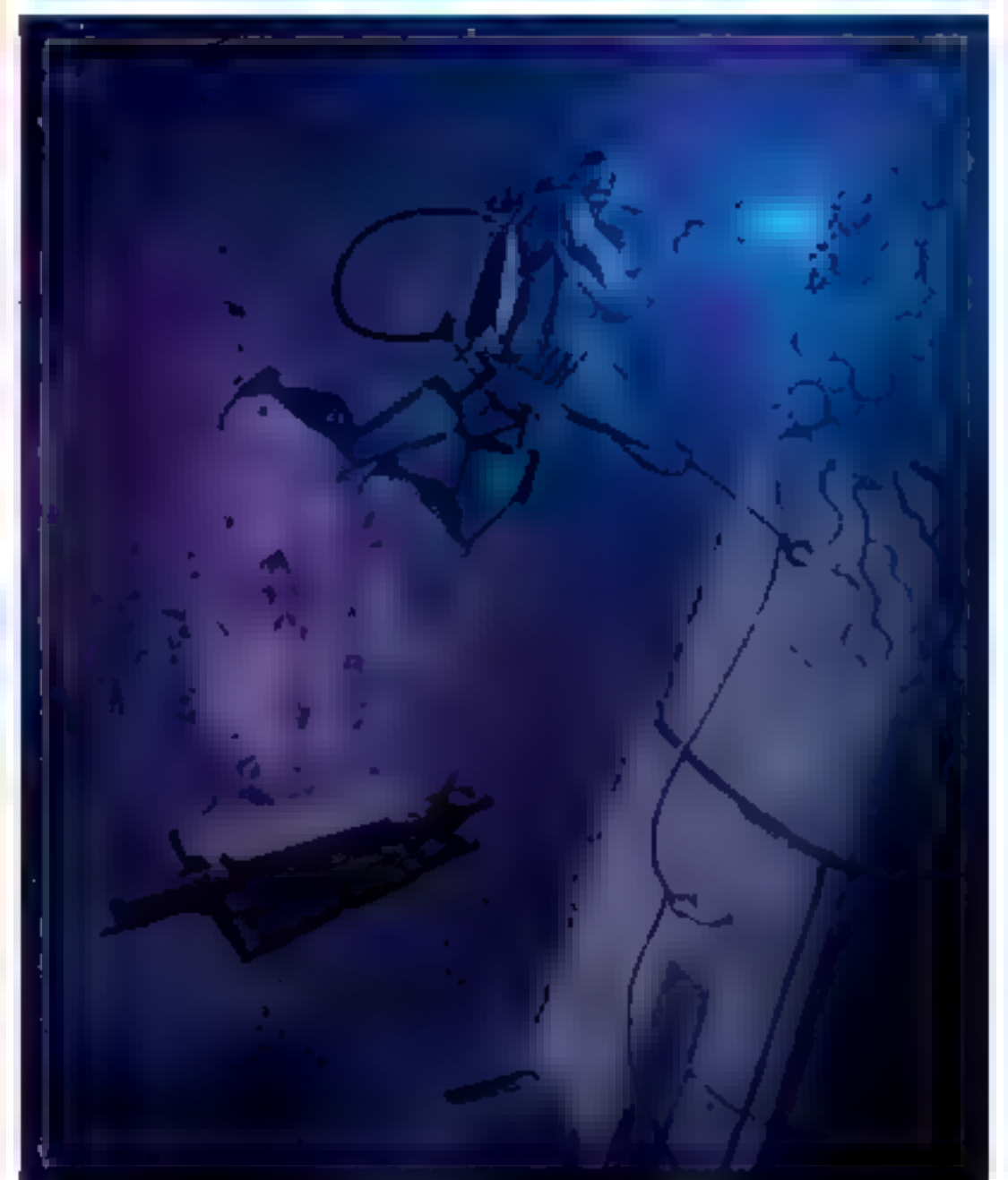
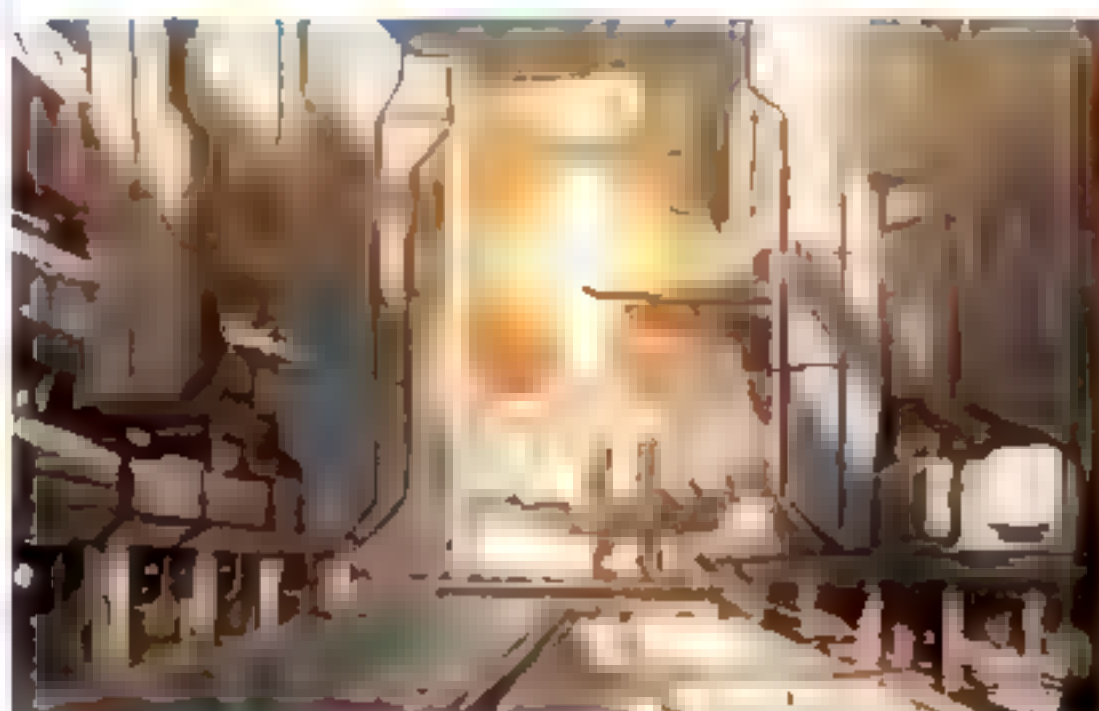
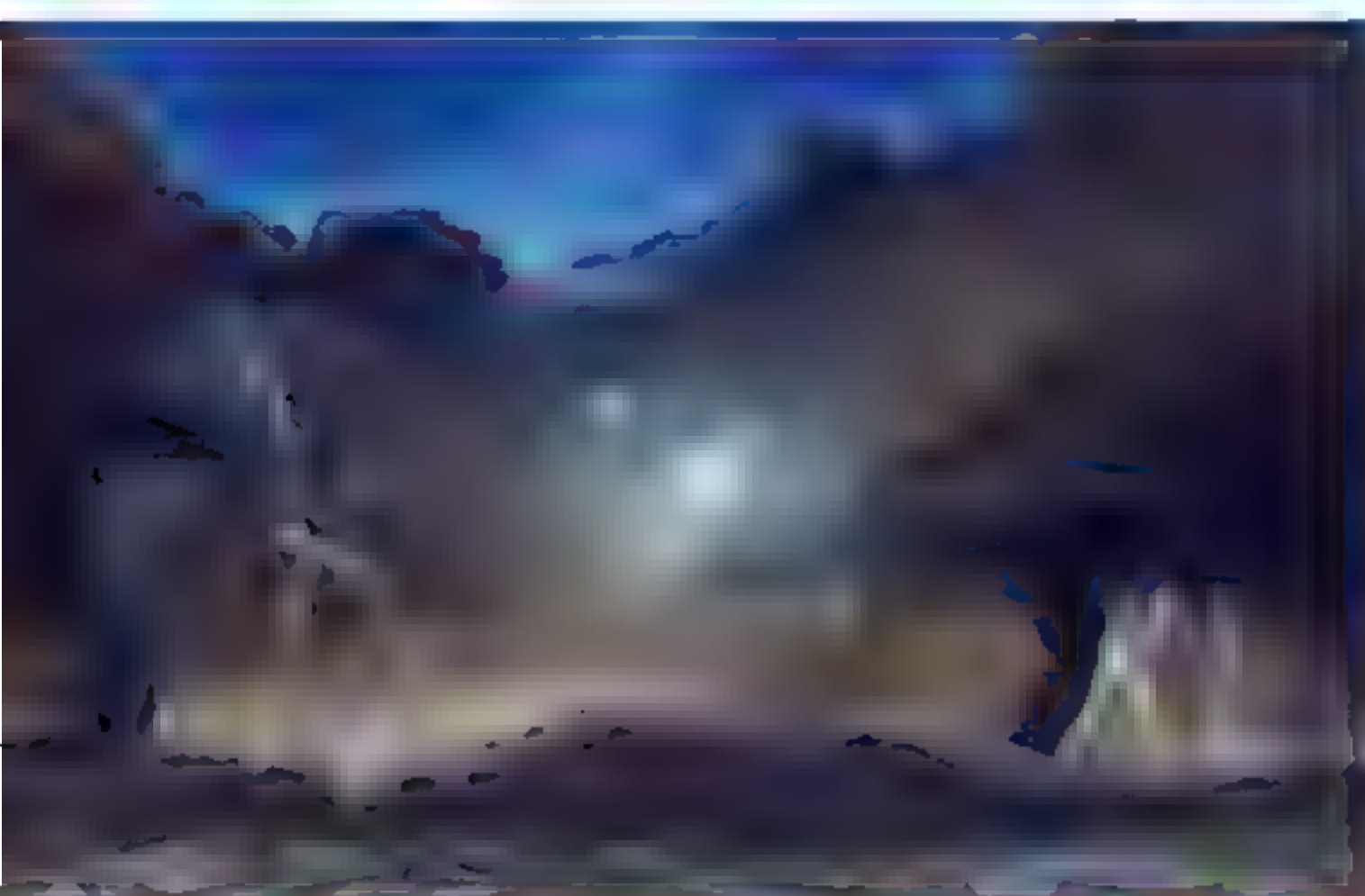
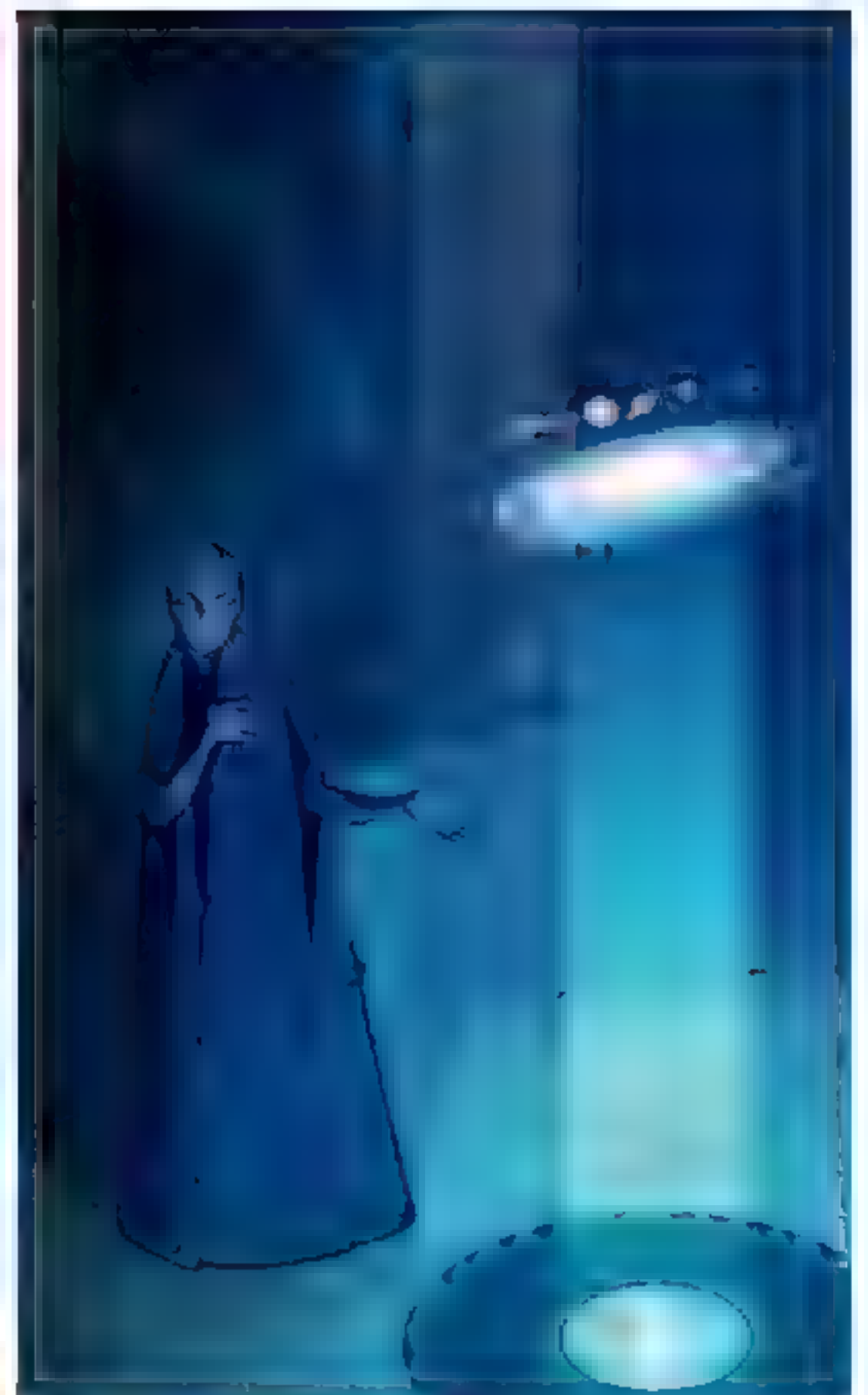
"I think one of the great luxuries of being in the games business is it mattered what you did. It didn't matter what you look like," Greg says.

"And even in business, you realize that with the business side of games, yeah, there's like the army of tan-pants, blue-blazer suit guys, but they're not the ones that actually necessarily have the real juice in the business. It's the people that actually create things."

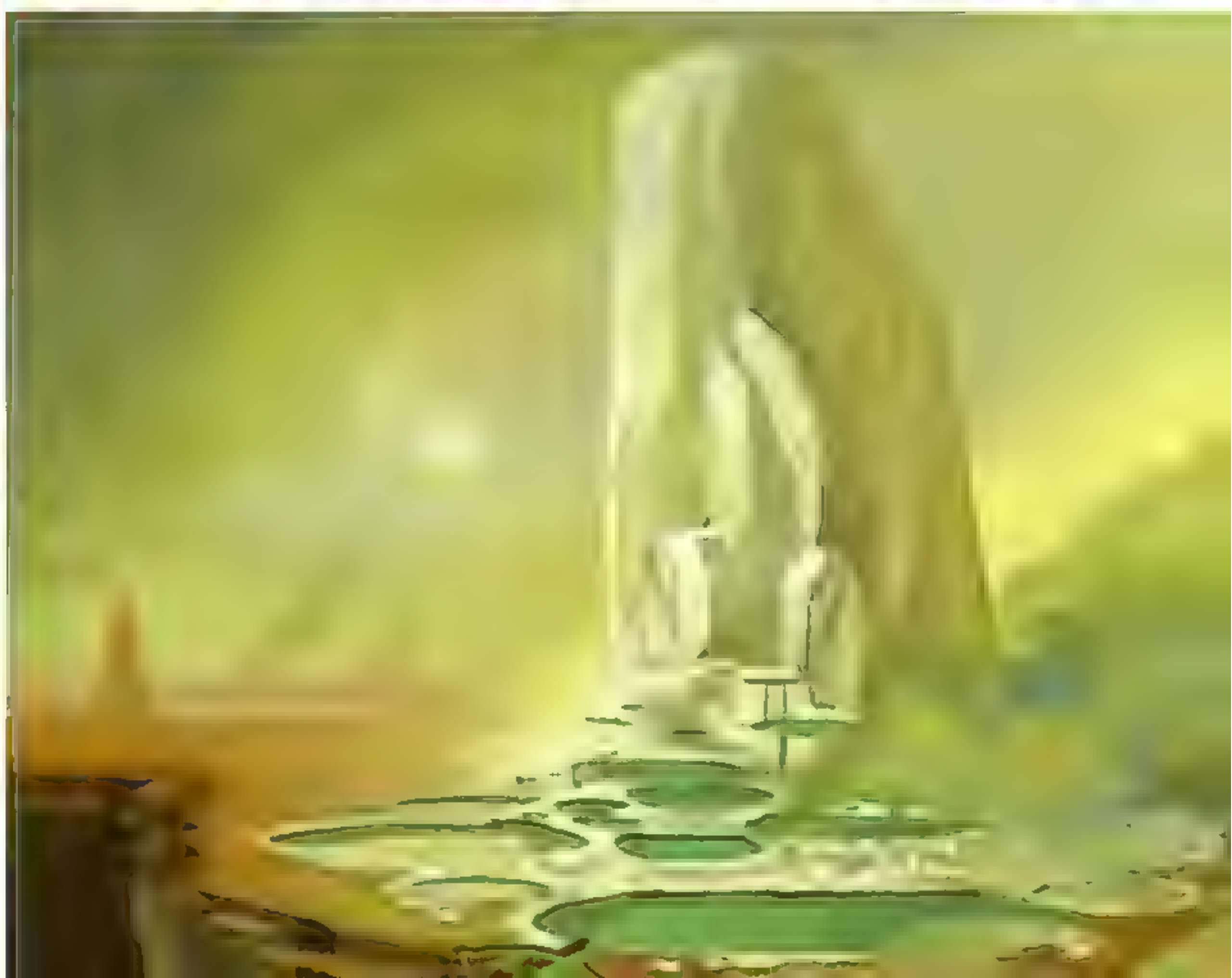
Recently, the BioWare Edmonton team has adopted Formal Fridays, where developers may choose to dress up in more traditional business clothing as a novelty.



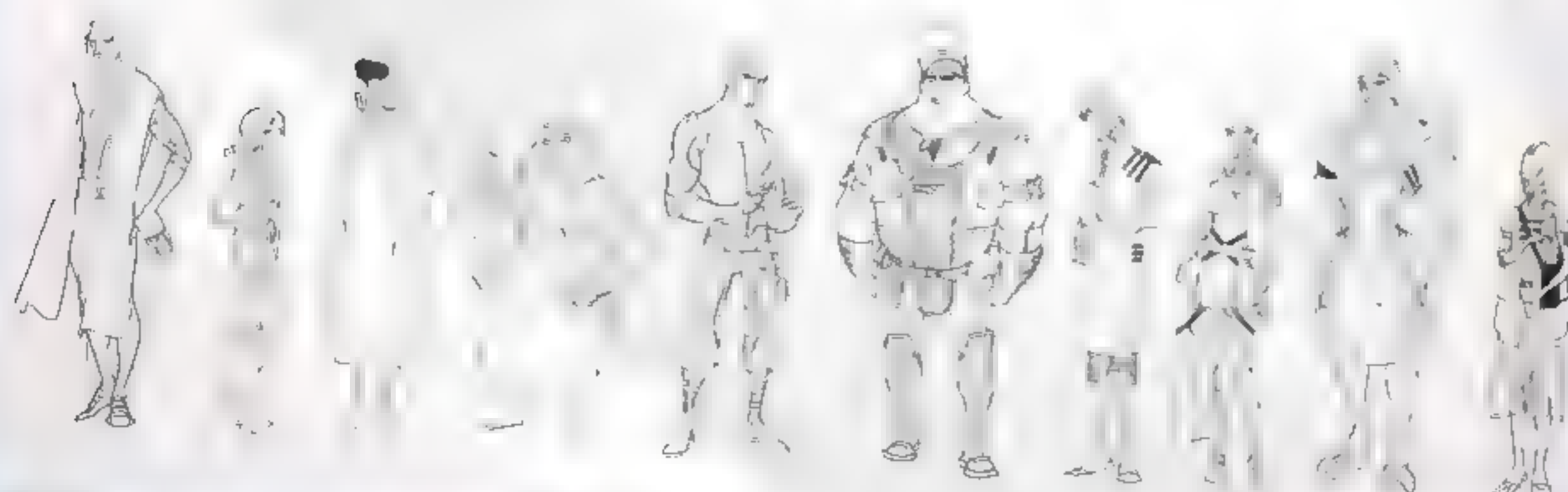
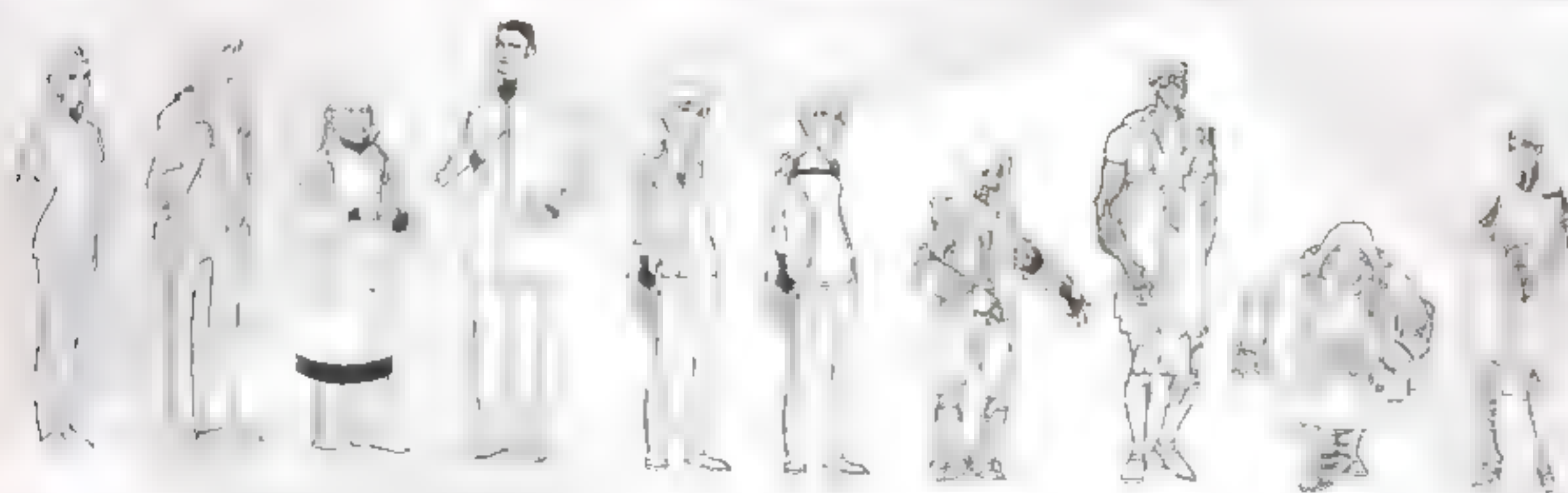




The smoky, hazy skies of *Mass Effect* and the Gaidy cave in *Dragon Age* are just a few of the many ways that Bioware's artists bring their own vision to the *Mass Effect* universe. They used their own ideas and a simple, clean design style to bring the game's story to life from Shepard's story.







Mass Effect: Corsair was concept artist Nick Thornborrow's first experience making art for the series. "It was such a short-lived project. It never got its feet under it," he says.

"I was really self-conscious that my art style wouldn't translate to Mass Effect. I was right about that." Nick later moved to Dragon Age, where he felt like his style was much more at home.





## HOW TO GET HIRED AT BIOWARE

THE WILD WAYS DEVELOPERS GOT THEIR FEET IN THE DOOR

"I WENT THROUGH I THINK FOUR OR FIVE INTERVIEWS. EACH ONE OF THEM, I GOT A PARKING TICKET, BECAUSE THERE'S NOWHERE TO PARK ON WHYTE AVE. I LIKE TO SAY IT'S THE MOST EXPENSIVE JOB I'VE EVER GOTTEN."

—MASS EFFECT LEAD DESIGNER  
PRESTON WATAMANIUK

**EARLY APPLICANTS HIRED** at BioWare submitted pitches on napkins and showed off skills like leatherwork and carving hunting decoys.

*Neverwinter Nights* designer Rob Bartel submitted a multistage puzzle box as part of his application.

*Mass Effect* art director Derek Watts was working at a furniture factory when he got a job as a texture artist on *MDK2*. At the time, he'd never used a PC. Only a Mac. And all his art was done in traditional media.

"If they did interesting things, we tried to figure out: how did that translate to another role?" Dr. Ray Muzyka says.

"We found incredible gems in people who on paper wouldn't look great," Dr.

Greg Zeschuk says.

"Sadly, nowadays it's like if you don't have your great résumé, you don't even get in the door."

From the *Baldur's Gate* days onward, applicants still had to run an interview gauntlet to make sure they could apply their unique skills to creating better video games—and, above all else, prove they could collaborate well with others.

"What's most important?" Ray says. "Experience? Yes, that's important. Education? Yeah, those are nice factors. And sometimes they're critical, if you have a really specialized role. But more importantly,

are they a good person? Not an asshole, and smart and passionate and a good person to work with as part of a team."

*Mass Effect* lead designer Preston Watamaniuk's gauntlet began with Greg, who spent the interview sitting on his desk. He wasn't wearing shoes, and mostly just talked to Preston about an RTS game they had both been playing. Then came technical interviews, where Preston was blindsided by all kinds of intimidating questions, including stuff he hadn't really had experience with, like linked lists.

"I went through I think four or five interviews. Each one of them I got a parking ticket, because there's nowhere to park on Whyte Ave.," Preston says. "I like to say it's the most expensive job I've ever gotten."

Preston became BioWare's second technical designer before being promoted to design lead on the *Mass Effect* trilogy, then design director on *Anthem*.

"I think I came in at the right time," Preston says, a sentiment echoed by so many designers who made integral contributions to BioWare's classic catalog of games.

### HIRING MARY KIRBY

*Dragon Age* writer Mary Kirby got her job at BioWare by entering a writing contest on BioWare.com—a contest she technically did not win.

Mary, by her own admission, wasn't a big name in the *Neverwinter Nights* modding community at the time, but when BioWare announced a community-judged contest for a writing job at the Edmonton studio, she applied anyway.

The contest guidelines for entering a module were pretty much the word-for-word guidelines used for official writing submissions to HR, with some slightly harder restrictions.







"It was entirely a trap to get people to apply for writing jobs, because apparently they had a lot of trouble getting people to apply for writing jobs," Mary says, laughing.

"I'd seen it and I was like, 'well, that's not going to happen.' But among the prizes was a stainless steel BioWare coffee mug."

Mary thought: "Well, okay, I really, really want a coffee mug."

She took a week and submitted a *Neverwinter* module in an original setting. Her module was one of about three hundred entries, judged and ranked by members of the community. In the end, Mary managed to place about twentieth in the competition. According to the rules of the contest, this was not good enough for a writing job or a stainless steel coffee mug.

Then she got a call from *Dragon Age: Origins*' design director. The team read her module. They were impressed. He asked if she wanted to actually apply for a job, through the more typical channels.

"I submitted a second module. They did a phone interview and they flew me up here," Mary says.

She got the job. But it wasn't until years later, when she was telling this story to a community manager, that she was finally awarded her stainless steel mug.

He found an extra one for her in the studio storeroom.

#### FINDING DAVID GAIDER

Before working at BioWare, former *Dragon Age* lead writer David Gaider was a manager for a hotel across the street from the studio's Terrace Office Tower location. When David was hired, BioWare was still at the Whyte Avenue site, ramping up work on *Baldur's Gate II*.

"I didn't know anything about BioWare, but had heard of *BG I*," David says.

Someone he knew had worked on the game as a 3D artist. "I assumed that he had worked on it remotely. That it was off in California, where all video games are made. Certainly not in Edmonton."

BioWare was looking for more writers, and staff had been asked to recommend locals who'd written anything game related to completion.

David had written a rule book for a LARP. His friend gave that to BioWare.

It was enough to get the attention of James Ohlen, design and writing director on *Baldur's Gate II*.

"I went down to the Whyte Ave. location, which looked really dicey, like some sort of spy organization," David says. "I brought some short stories I'd written in high school. I don't think he read them."

James was interested instead in David's near-encyclopedia knowledge of Dungeons & Dragons lore. It wasn't much of a formal interview. David could have the job if he wanted it.

He didn't want it.

"Looking around at the place," he says, "it seemed like I could leave my hotel management job with pretty decent pay for this writing job with half the pay for a company that could shut down at any moment. So I said, 'No, thanks.'"

The following Monday, the regional manager of his hotel chain came by for a meeting. The hotel had been purchased. They were laying David off.

David decided to give the BioWare job a shot after all. He went on to write for the studio for more than sixteen years, working on *Baldur's Gate II*, *Star Wars: Knights of the Old Republic*, and three *Dragon Age* titles, among others.



#### BIO-TRIVIA

##### MASS EFFECT ALMOST HAD A SPINOFF ON THE NINTENDO DS

After the success of *Star Wars: The Force Unleashed*, BioWare was looking for a new project. The Nintendo DS was a hot platform, and the studio was looking for a way to bring the *Mass Effect* franchise to the handheld console. The idea was to create a spinoff game that would be a prequel to the first *Mass Effect* game, set in the same universe but focusing on a different character. The game was to be developed by BioWare's Montreal studio, and it was to be released in 2008. However, the game was eventually canceled, and the DS version of *Mass Effect* was never released.

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THANK YOU



Three studios, five years, and hundreds of people made *Mass Effect: Andromeda* a reality, and we can't wait for you to explore this new galaxy. From all of us at BioWare, thank you for sharing the journey with us. We hope you enjoy this next chapter in the *Mass Effect* universe.

MASS  
EFFECT: team  
ANDROMEDA



Montreal



Austin



Edmonton

## BIOWARE TEAM PHOTOS PAST AND PRESENT

OVER THE YEARS, BioWare grew from three founders and one employee to hundreds of people in multiple locations. But it can be hard to gauge just how many people work in an office until you gather them all in a room to look up awkwardly at a camera.



## EDMONTON'S THEATER COMMUNITY DRIVES BIOWARE'S VOICE CAST

GAME CREDITS A WHO'S WHO OF LOCAL STAGE PRODUCTIONS

WHILE THERE'S BEEN NO shortage of international acting talent in BioWare games over the years, the studio also has a long history of casting actors from the thriving theater scene in Edmonton.

Perhaps the most famous example is Mark Meer, a veteran improviser and stage actor who was cast as male Commander Shepard in the *Mass Effect* trilogy.

From the very start to the present day, BioWare has relied on Edmonton actors to round out the massive casts of characters who occupy every game's world. Seasoned local actors like Belinda Cornish and April Banigan have played additional voices in multiple BioWare releases, while developers like voice-over director Caroline Livingstone (pictured on stage below) and lead writer Cathleen Rootsaert were both well known for acting, writing, and directing on Edmonton stages before joining BioWare.

"Edmonton's theater scene might be unexpected from somebody looking from the outside in," Cathleen says. "It's actually really vibrant and successful, with one of the top theater schools in the country. We had the first Fringe Festival in Canada. I think that Edmonton is a city of overachievers in general. That's why BioWare exists in a way, and that also filters out to things like our festivals and our theater community."



## REAL TALES OF DEVELOPMENT: MATT GOLDMAN ON SURVIVING SUCK VALLEY

**DRAGON AGE CREATIVE DIRECTOR** Matt Goldman says finishing a game is a journey through a treacherous valley where it's easy to lose your way. His usual advice to aspiring developers is start small and just finish something:

*This is the journey. You're on the crest of a valley. And you can see the shining hill in the distance. Starting off on that walk and going down the hill? That's easy. You're full of hope. But then after a while, you're knee deep in leech-infested water, and there are razor vines cutting you to shreds. You're in Suck Valley. And you can't remember why. "Why the fuck am I here? Where am I going? I've forgotten where I'm going. I'm just being eaten alive by mosquitoes."*

*Just keep going.*

*But then you finally get out of Suck Valley, and you're like: "Oh, man, there's like three thousand meters of elevation gain up these switchbacks. I know where I'm going now. And I have to go up three thousand meters of elevation gain before I get to the other side."*

*And then you do it. You get to the other side. And you're like: "Yay, I got here. And this isn't as cool as I thought it was going to be."*

*It takes a while for you to get a bit of distance, enough time to go: "Hey, man, that was actually pretty good. I can't believe we did that."*

*So that's my story of the journey through Suck Valley. And for everybody who wants to try something, it's like, get Unity, and then just try to make Asteroids or Space Invaders. Like, just do something really easy. It's ten times harder than you think. And then finish it.*

## TRIP THROUGH SUCK VALLEY







## THE MAKING OF

# MASS EFFECT 2

### A SPACEFARING DIRTY DOZEN



#### KEY FACTS MASS EFFECT 2

**RELEASE DATE:**

January 26, 2010

**GENRE:**

Action RPG

**PLATFORMS:**

Xbox 360, Windows,  
PlayStation 3

**SELECTED EXPANSION CONTENT:**

*Normandy Crash Site, Zaeed:  
The Price of Revenge,  
Firewalker, Kasumi: Stolen  
Memory, Overlord, Lair of the  
Shadow Broker, Genesis*

**Developed in Edmonton  
and Montreal**

**(Overlord, Arrival DLC)**

**Published by Electronic Arts**

BIOWARE'S FOLLOW-UP TO *Mass Effect* was bigger and bolder than the original in pretty much every way—from the squad mate count to the galaxy map—while player choices made in the original game carried over to significantly impact the sequel's plot, a first for BioWare.

Characters drove the story of *Mass Effect 2* in a *Dirty Dozen*-inspired plot that saw a resurrected, Cerberus-backed Commander Shepard searching the galaxy for a team to tackle the mounting Reaper threat.

The game streamlined some RPG mechanics in favor of greater emphasis on action gameplay. Instead of the Mako, Shepard explored hostile planets in the M-44 Hammerhead, a hovering infantry craft.

The game boasted a massive squad of characters, recruited for a climactic suicide mission where anyone could die, depending on the player's tactical decisions.

There were two camps on the team: those who wanted to push combat and systems forward, redefining the *Mass Effect* experience, and those who wanted to make a true sequel, with the same gameplay and systems and a new story.

"I think it ended up being a good push-pull," *Mass Effect 2* editor Karin Weekes says. "It felt like a pretty healthy creative conflict."

#### ORIGINS OF THE ILLUSIVE MAN

*Mass Effect 2* was a game you could hold up to someone who argues that games aren't a serious medium and say: "Oh yeah, then why is Martin Sheen in this?"

Sheen was cast as the mysterious Cerberus leader known as the Illusive Man.

Trilogy executive producer Casey Hudson says Sheen was their first pick to play *Mass Effect 2*'s shadowy string-pulling villain.

The idea for the character came from a mash-up of concepts Casey had collected over the years. The name "Illusive" was originally Casey's pitch for naming *Dragon Age: Origins*' Eclipse engine, a word inspired by Obi-Wan Kenobi's line in *The Phantom Menace*: "It's not about the mission, Master. It's

something . . . elsewhere. Elusive."

"I thought: What if we called our next engine 'Elusive,' but used an *I*, and then it's like, illusion, it's 'Illusive,'" Casey says. "So that was my idea for our game engine name, which we didn't use. But I still really liked the word *illusive* with an *I* and what that conjures."

When DLC for the original *Mass Effect* was in production, Casey had been watching a lot of CNN, specifically Anderson Cooper.

"How is one guy traveling to all these places and never looking tired and always being able to speak with clarity?" Casey says it seemed almost superhuman. "What if there was someone who is the absolute maximum of the things that you would aspire to be, but also the worst of humanity?"

Cooper, though far from the worst of humanity, became an inspiration for the Illusive Man, right down to the gray hair and piercing blue eyes.

The other piece was his role as a major influence in politics secretly pulling the strings. Inspiration for that came from Jack Bauer's brother Graem in *24*, a figure with considerable clout who works behind the scenes. "He can call up the president and tell the president what to do and hang up, because he's so connected and so influential," Casey says. They then added Martin Sheen, who had played a president. His performance brought wisdom and gravitas to the role. "He had quit smoking, but the character smokes. He didn't want to fake it, but he also didn't want to smoke, so he actually asked for a cigarette," to hold it, stopping his words to take drags with natural cadence.

With that, they had a performance by Martin Sheen coupled with a look and superhuman aura inspired by Anderson Cooper and the clandestine influence of Graem Bauer.

"You put those things all together, and that's how we got to the Illusive Man," Casey says.

#### WHAT'S A MISSION WITHOUT SOME SCARS?

Shipping a AAA game can often feel like landing a starship while it's still being built. *ME2* had plenty of last-minute fixes to ensure that it landed safely.





"While we brought back some of the original characters, *Mass Effect 2* was very much about discovering a set of amazing new characters," trilogy executive producer Casey Hudson says. "The initial reaction as we started promoting the game was very negative, because people didn't want to know about Jack and Mordin and these new characters. [Fans were] like: 'Get them out of here. We want our characters from the first game.' But then when they played them, those became some of the most popular characters [in the series]."

On the writing side, the team was still pushing to write and revise lines hours before recording sessions started.

The writing team also got pretty used to setbacks. Multiple writers left *Mass Effect 2* during development, including lead writer Drew Karpysyn. *Mass Effect* writer Mac Walters became lead writer on the project when Drew left.

Patrick Weekes joined the original *Mass Effect* from *Revolver* after Mac fell down a flight of stairs and injured his back during that game's production. In a similarly hectic period during *Mass Effect 2*'s production, it was Patrick's turn, breaking their shoulder while ice skating.

"It was bad. With the break, I was out for two weeks and then I was on half time," Patrick says.

While technically a simple fracture, it had broken in a way that caused the collarbone to slide down into the empty space. It required surgery and would take six weeks before Patrick could type with two hands again.

It was a lot to juggle, considering Patrick and Karin Weekes's kids were two and four years old at the time.

"I think it would not be overdramatic to say that was the most dramatic two weeks of my life," Karin says. "I remember calling Mac Walters on my phone and going, 'Hey Mac, sorry to bug you on Sunday morning, but I have some news.'"

Mac, who was injured during *Mass Effect*'s production, of course understood. In the waning months of *Mass Effect 2*'s production, the team had lost a writer to a growing BioWare studio in Montreal, while two others had left for other opportunities. With Mac's role keeping him mostly in recording sessions, that left veteran BioWare writer Luke Kristjanson, Karin, and fellow editor Cookie Everman to land the story safely.

"Me, Karin, and Cookie took over the writing bug and task list, and I can't stress enough how much they did to get *ME2* out the door. There's no part of that thing we didn't touch," Luke says.

Patrick helped out where they could, writing transition dialogue and non-VO in lowercase, leaving Karin to clean up the copy.

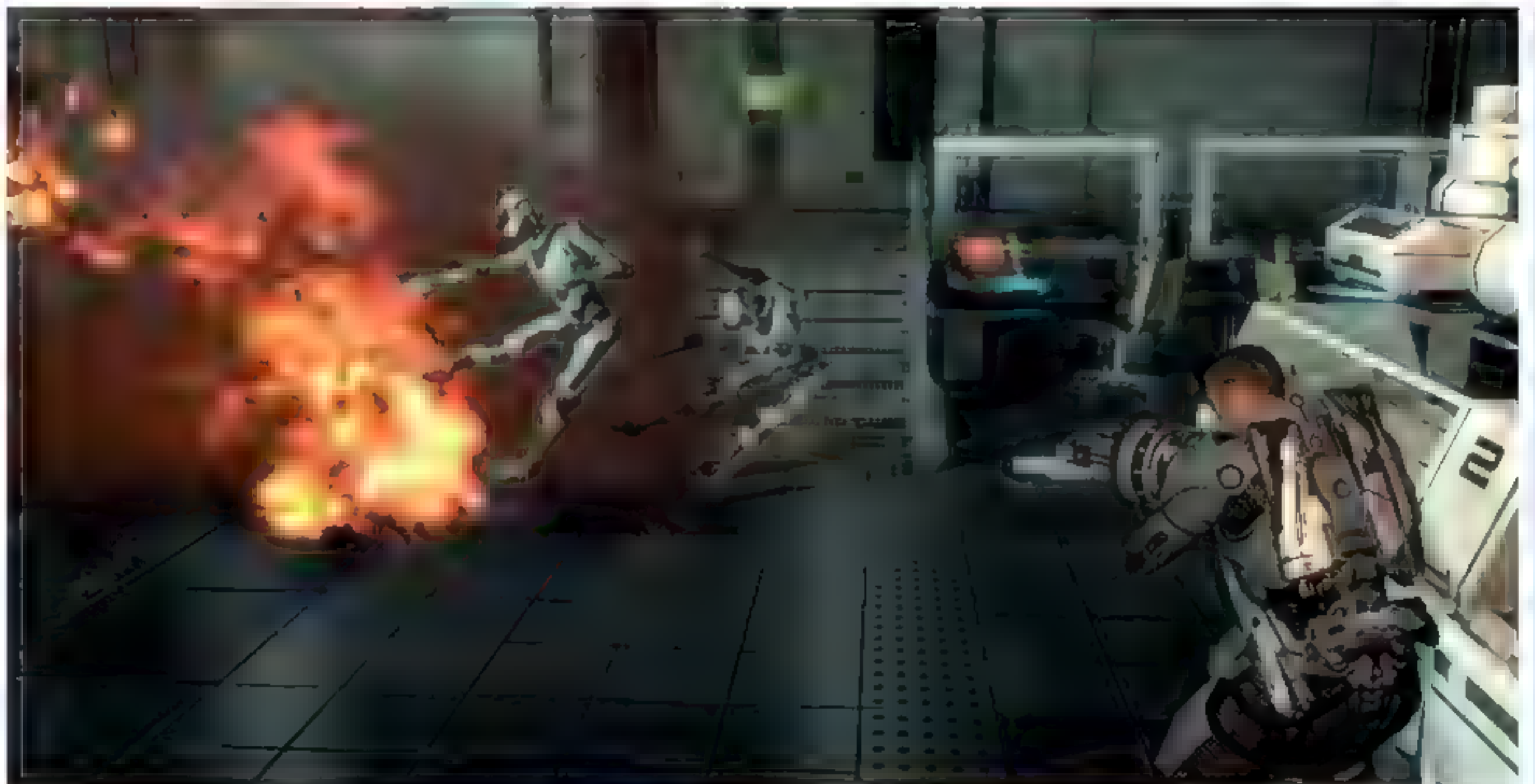




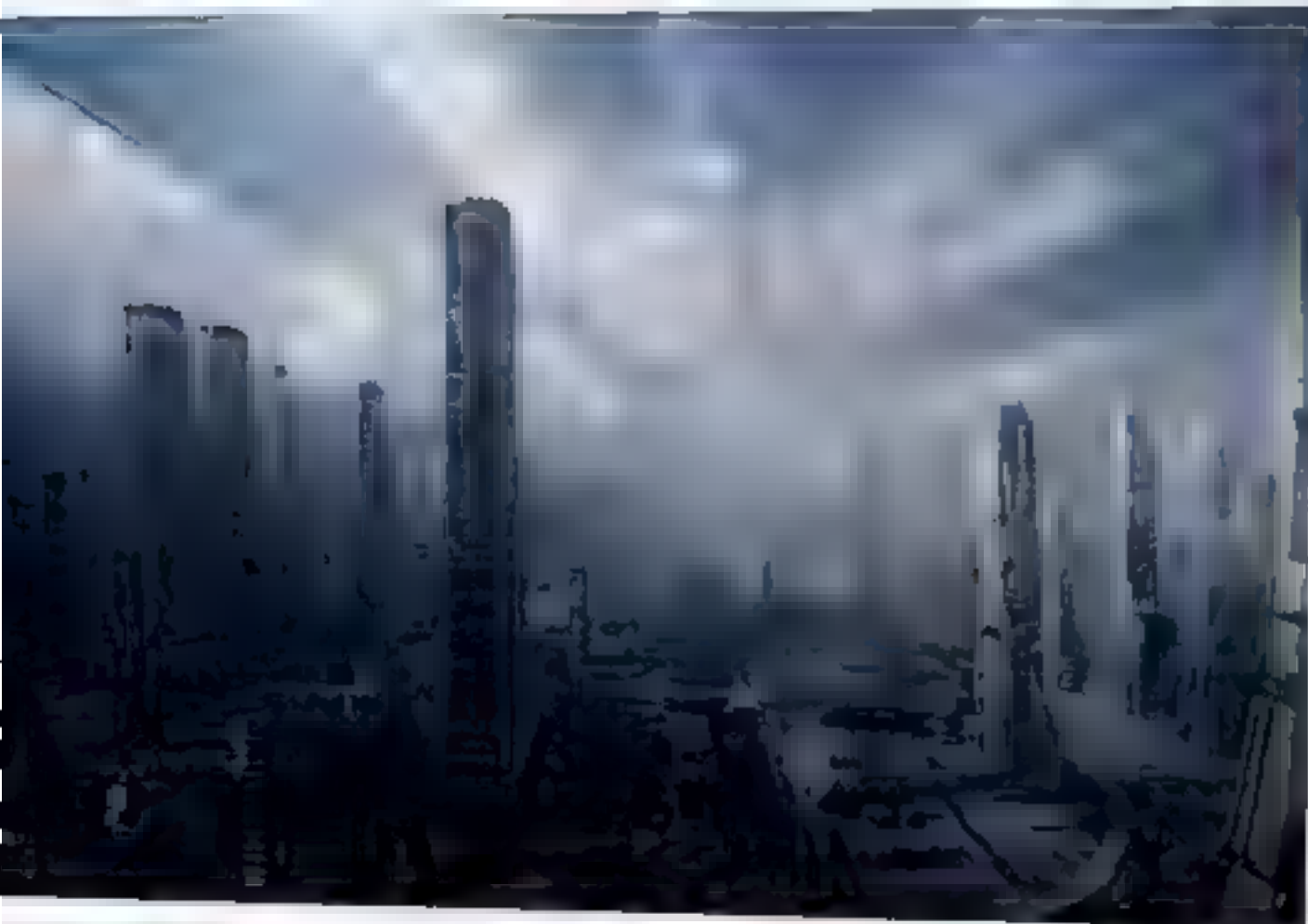


Mass Effect 2 puts a lot of emphasis on the squad, and it's one of the things that track, among so many other things, which squad makes Shepard's life a lot easier. If the game line whether or not they are in the squad, it's a lot of variables at play, and it's the nature of the game's complexity, in which I was pressed to put the entire squad to be a lot of things.

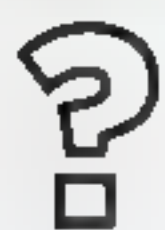
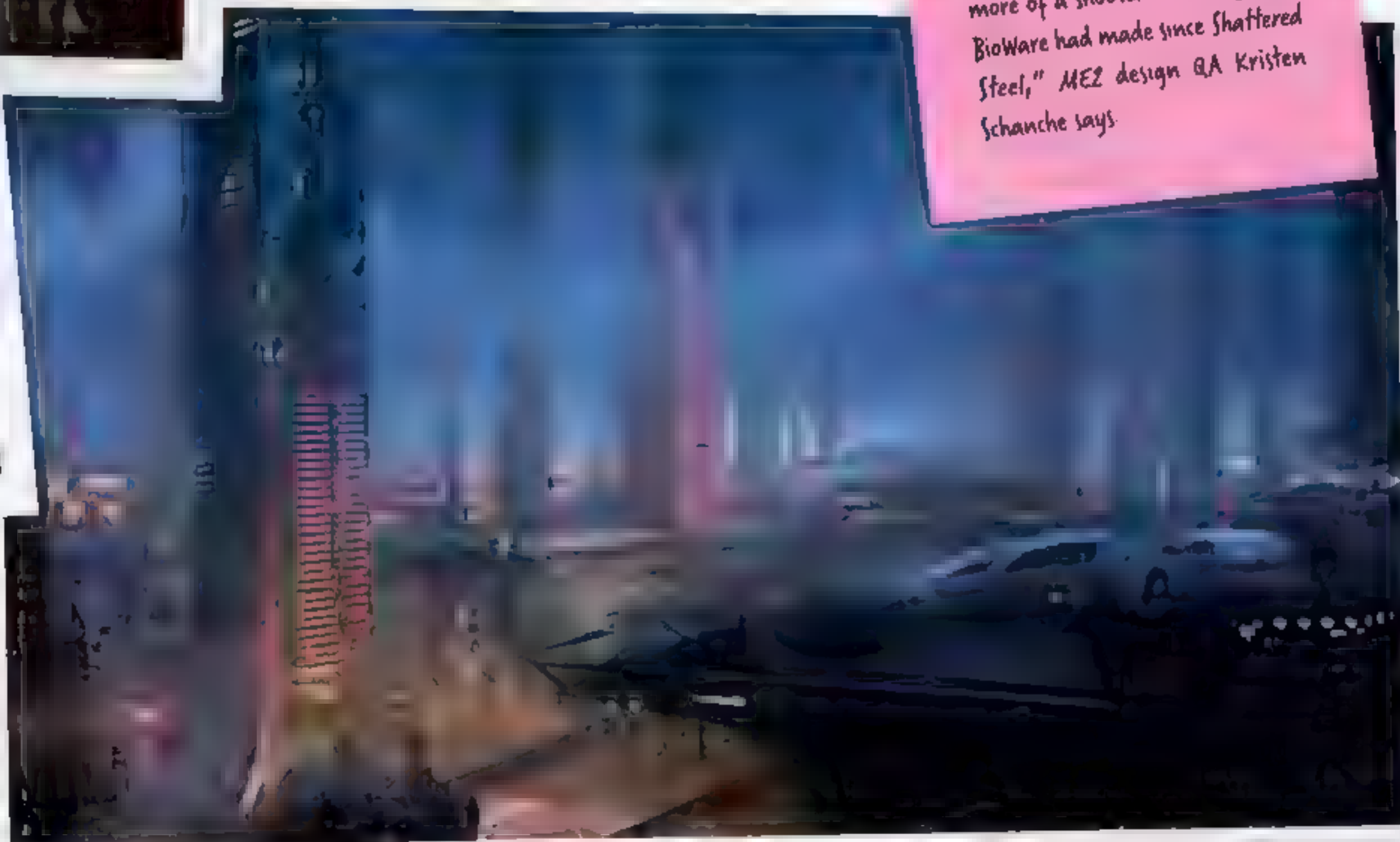
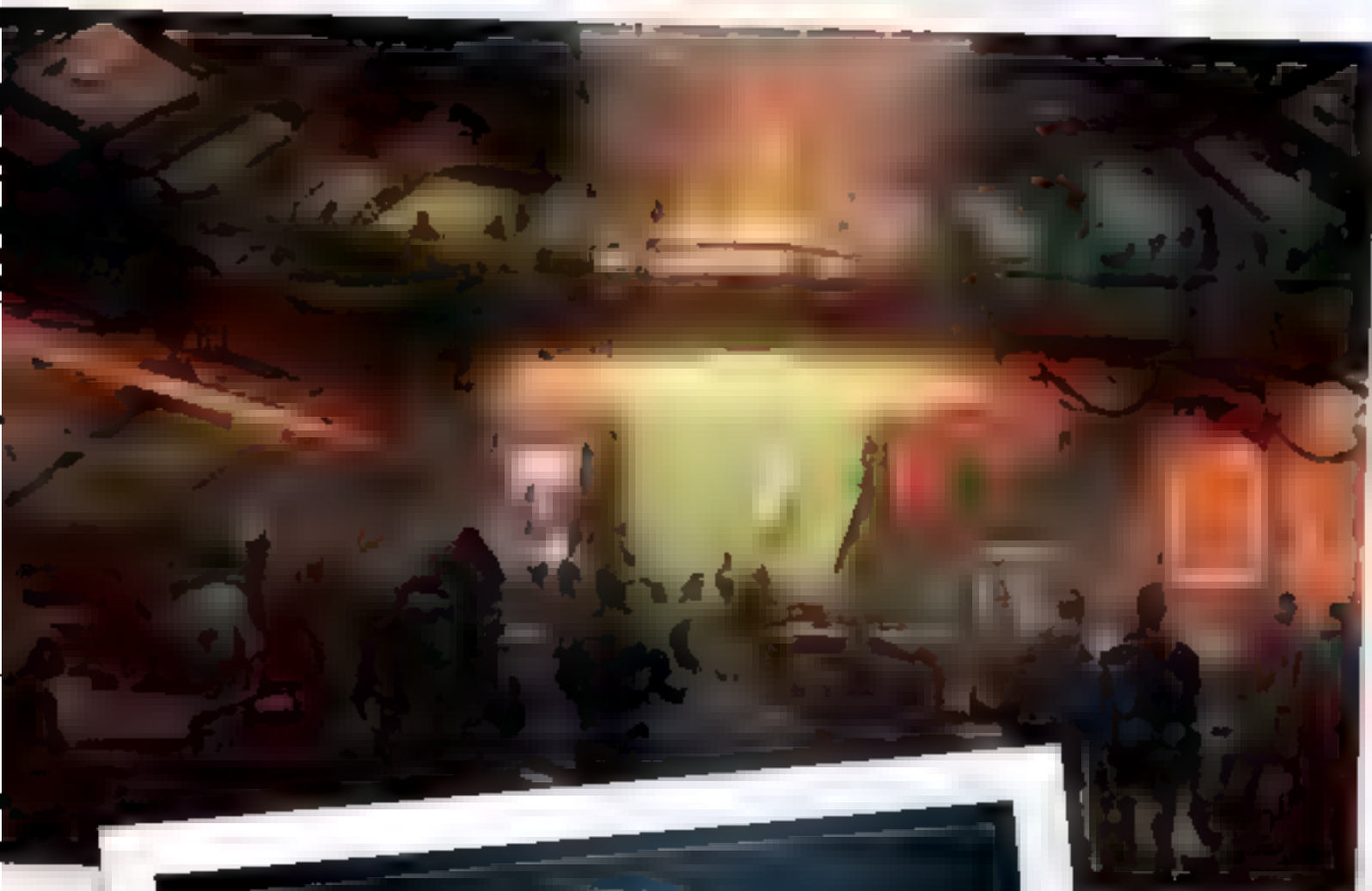








"Mass Effect 2 was much more of a shooter than Mass Effect and more of a shooter than anything BioWare had made since Shattered Steel," ME2 design QA Kristen Schanche says.



## BIO-TRIVIA

ME2 INCLUDES AN INTERACTIVE COMIC EXPERIENCE

After the initial success of the Windows Mass Effect 2, the first in the series to be released on PlayStation 3 for console, it was time to move on. BioWare worked with Dark Horse Comics to create Mass Effect: Genesis, an interactive comic DLC that might play up the story. This included featuring branching paths that allowed player to make key choices from the original Mass Effect, including the fate of Wrex, the Citadel Council, and the Rachni Queen, as well as whether to save Ashley or Kaidan.





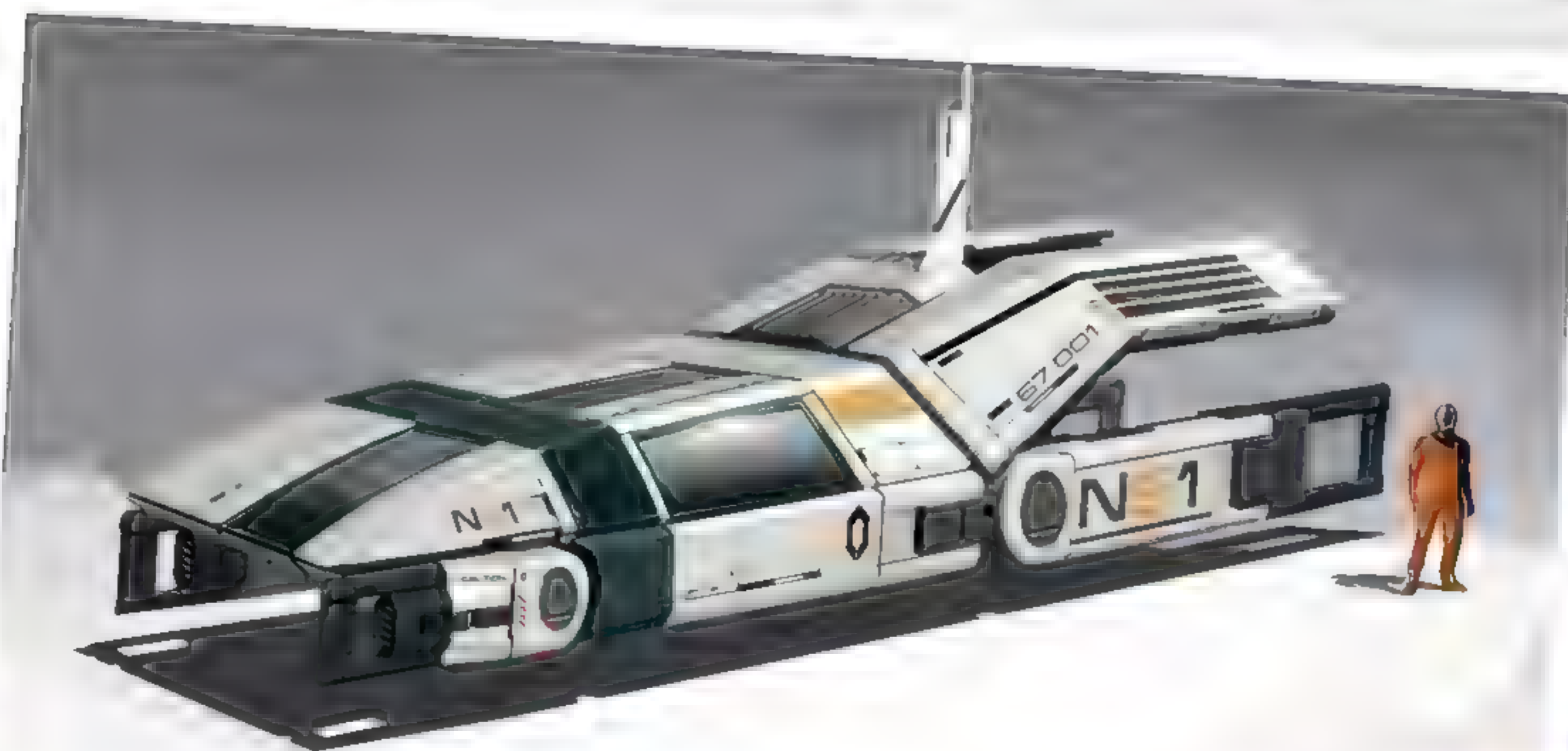


New romance options were added in *Mass Effect 2*, like fan-favorite Garrus Vakarian and the drell assassin Thane Krios (pictured). With Thane, artists took great care to craft a character who would appeal to human players while still appearing alien. At one point, the artists sent multiple variations of Thane to the team, asking them to vote on which appearance they found the most attractive.

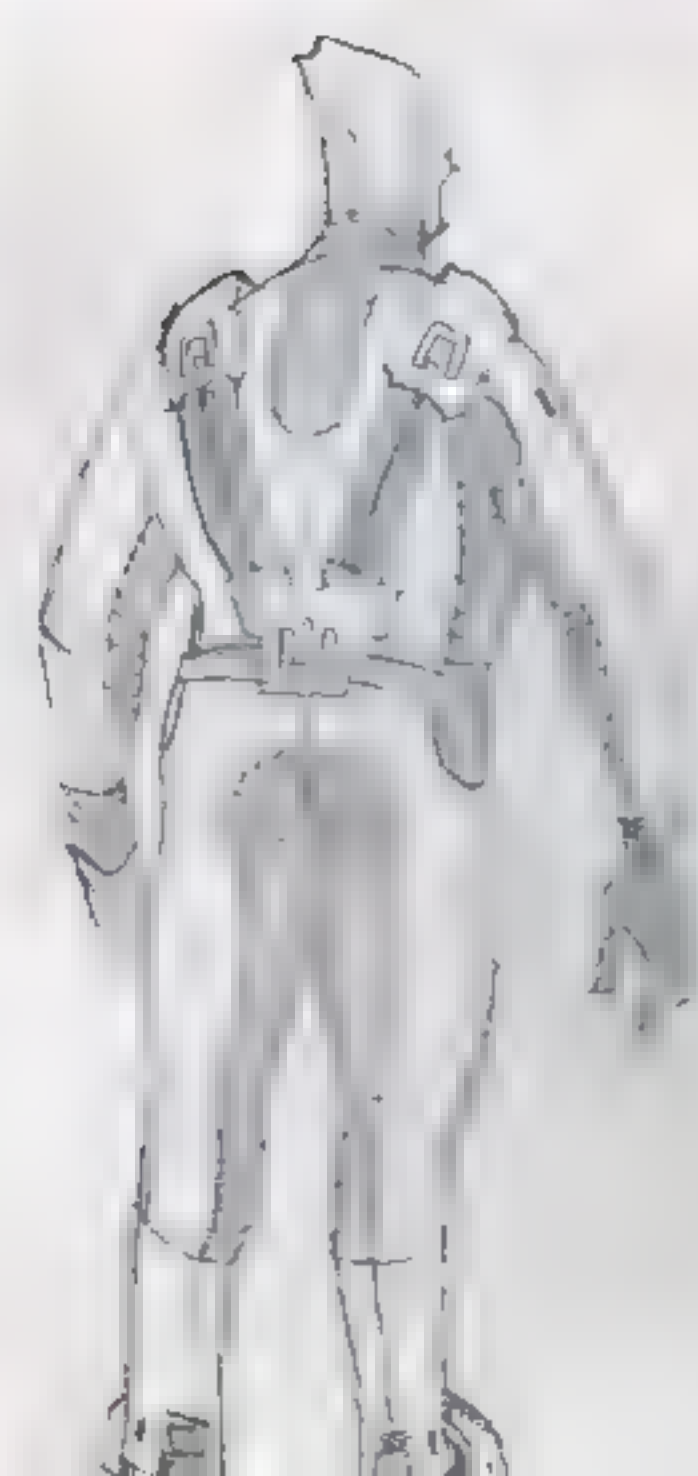
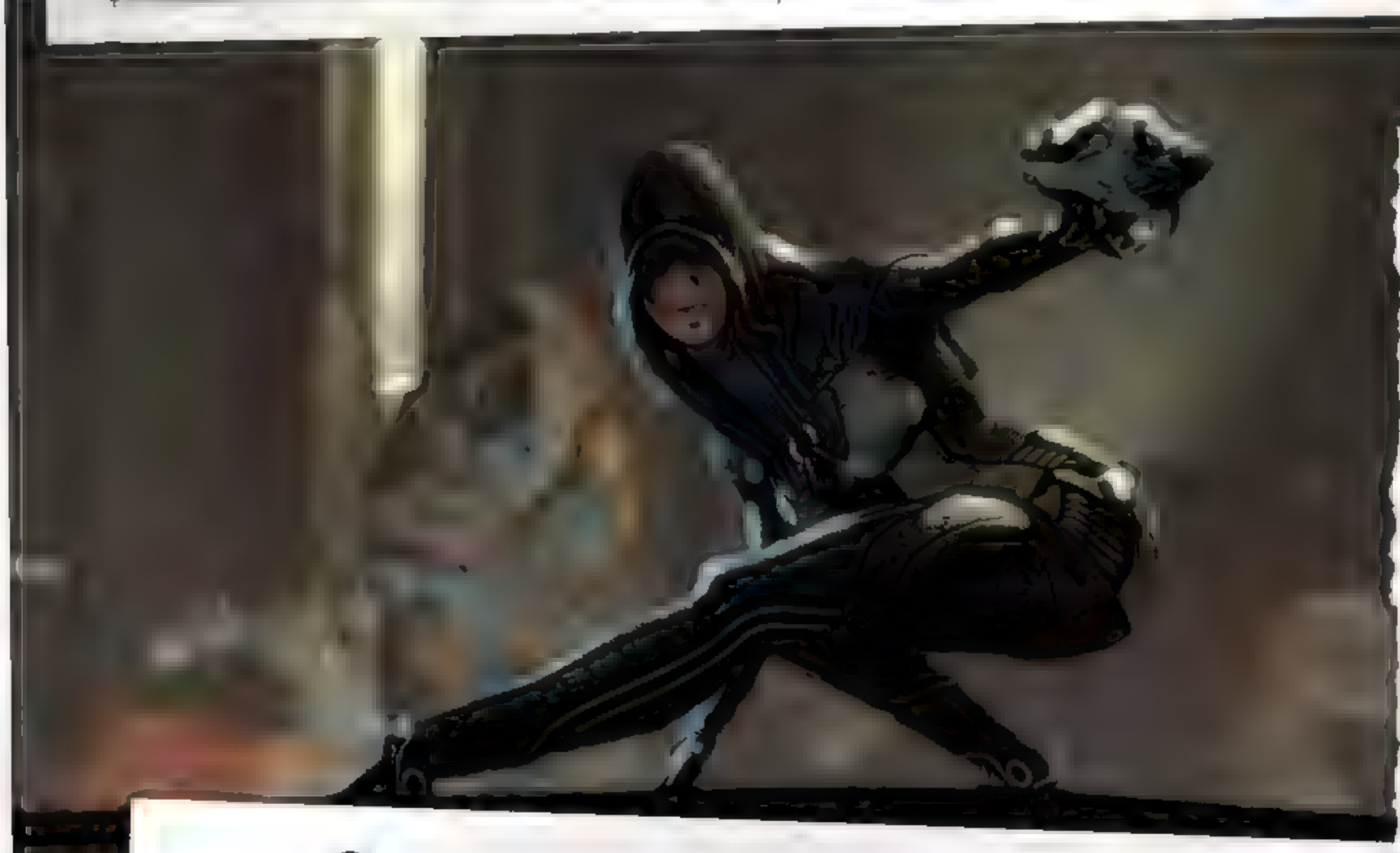
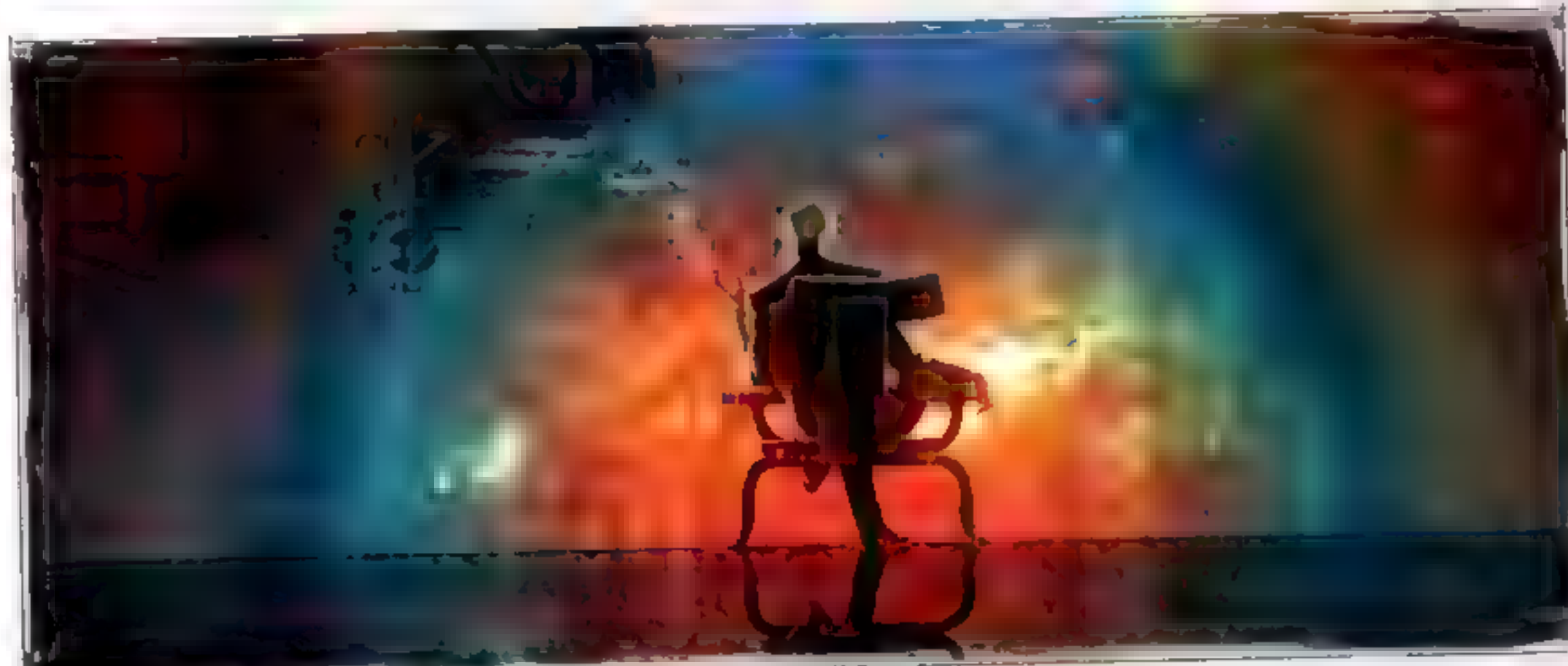




Most of the Normandy crew was actually written by lead level designer Dusty Everman. "I gave him advice in the evenings between bugs," senior writer Luke Kristjanson says. "Kicking ME2 into shape was a wild ride."









## BIOWARE EN FRANÇAIS

### THE FOUNDING OF BIOWARE MONTREAL

IF THERE'S ONE THING that seemed constant as time went on at BioWare, it was growth. In a lot of larger studios, turnover after each game's release is common. At BioWare, staff stayed, and more seemed to be added to the roster with pretty much every project.

This was a good problem to have, a sign of success. But it was also proving increasingly difficult to attract talented developers to Edmonton, Alberta, of all places.

Enter Montreal: a large metropolitan culture capital in Quebec. Tax credits by the Quebec government meant the cost of making games in the province was much cheaper than elsewhere. A large pool of developers had been drawn to the city. If BioWare wanted to expand, why not there?

BioWare began investigating the possibility of opening a studio in Montreal as early as 2004, then interim director of IT Richard Iwaniuk Richard Iwaniuk says. But it wasn't until BioWare was acquired by Electronic Arts in 2007 that the idea started to seem possible.

"That just opened the door for us to fast-track it. They had extra space and we got permission right away to actually open up a studio there."

While BioWare Montreal officially opened in 2009, it quietly began much earlier as a small satellite studio focused on cine-animation and game support.

"We started as a little team within EA. There were three animators from the first *Mass Effect* who had all moved to Montreal. We started a team with those three and then just kept building from there," *Mass Effect* lead animator Jonathan Cooper says.

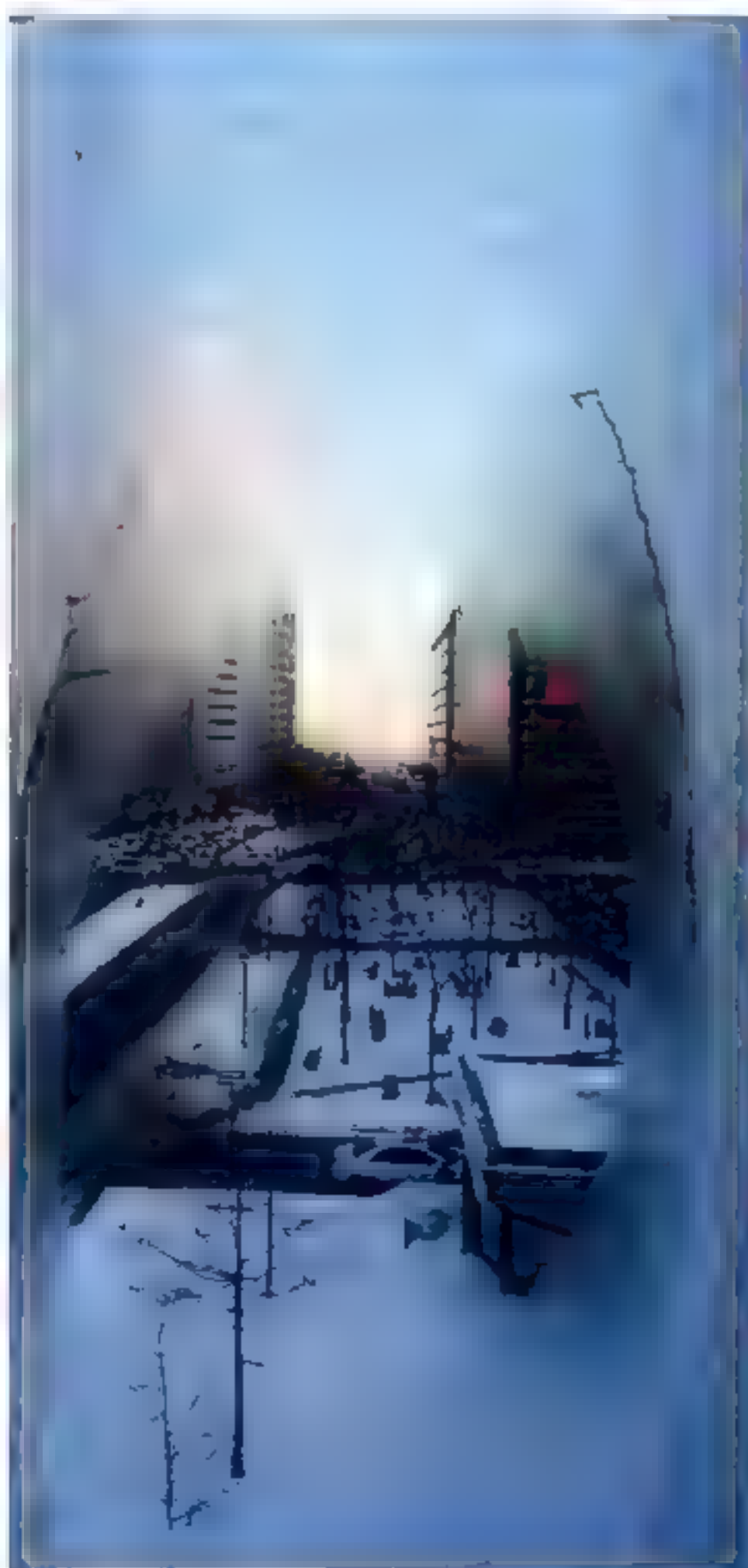
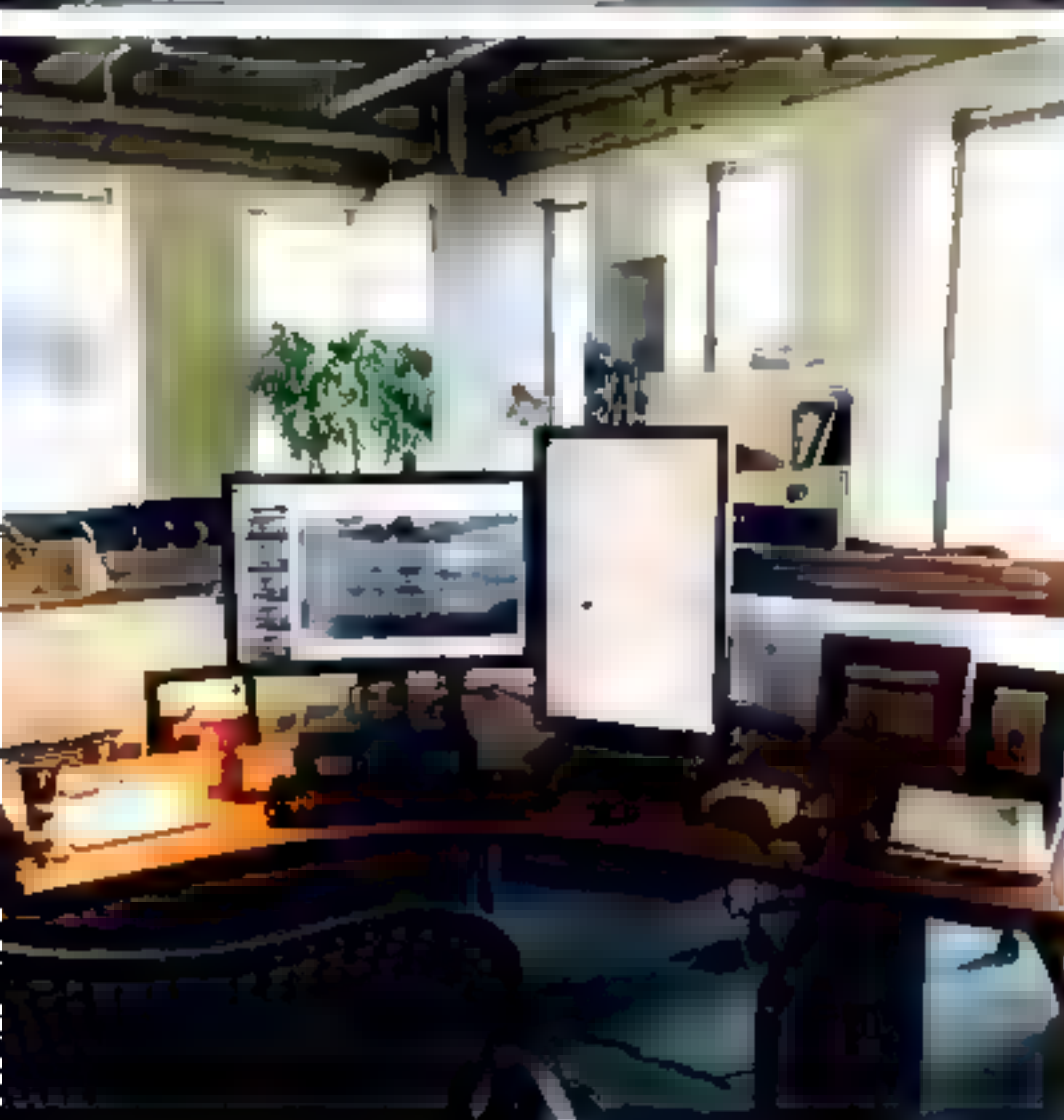
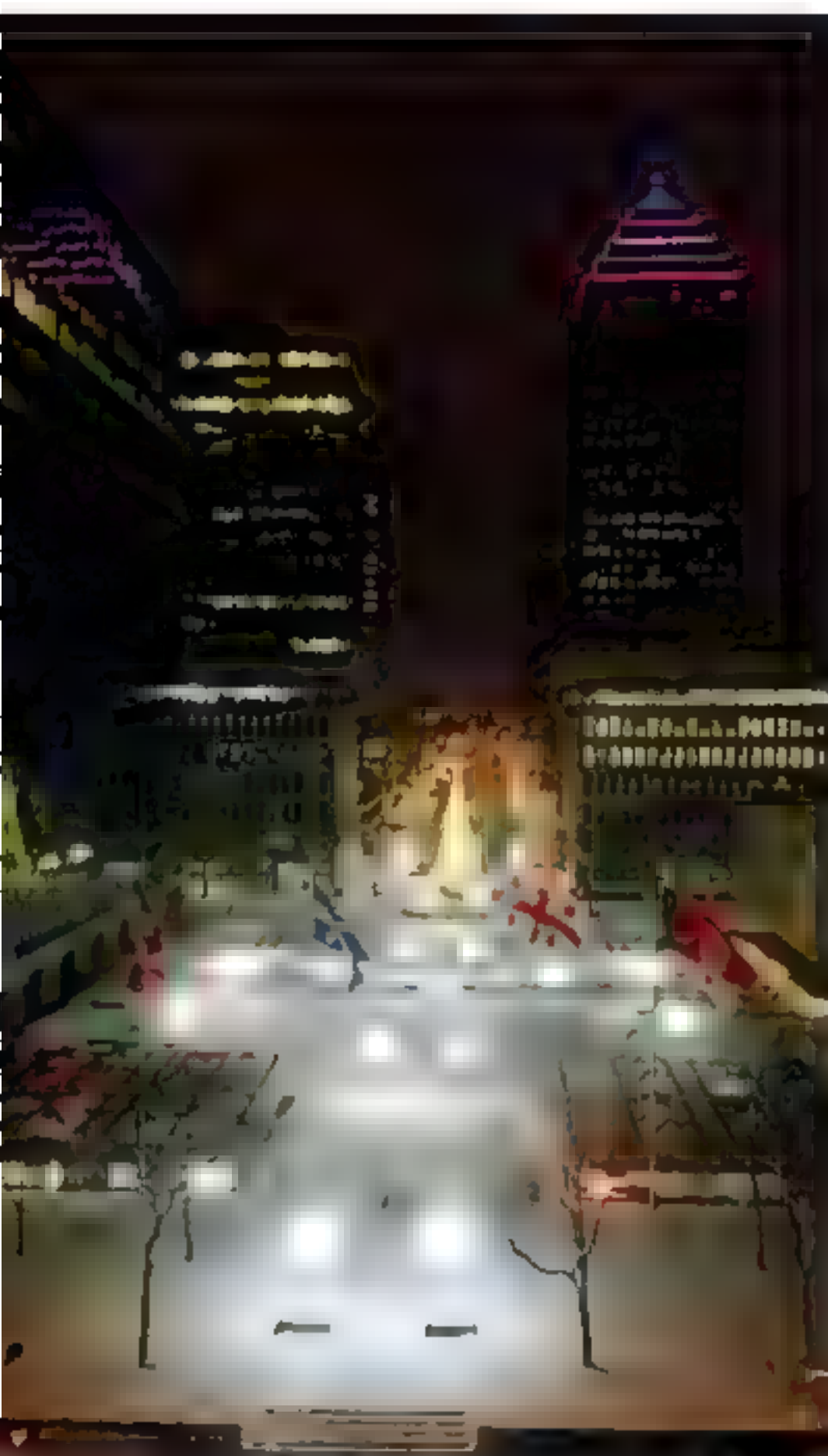
"It was a fun time. Good friends. Lots of egos flying around, because pretty much everyone that was on our team was a lead or a director at other studios. It was a good problem to have, because people were really top of their game."

From that core group of developers, many of them Edmonton expats, BioWare Montreal grew to well over one hundred people, making *Mass Effect 2* and *Mass Effect 3* cinematics as well as major story DLC like *Arrival* and *Omega* before taking the lead on development of *Mass Effect: Andromeda*.

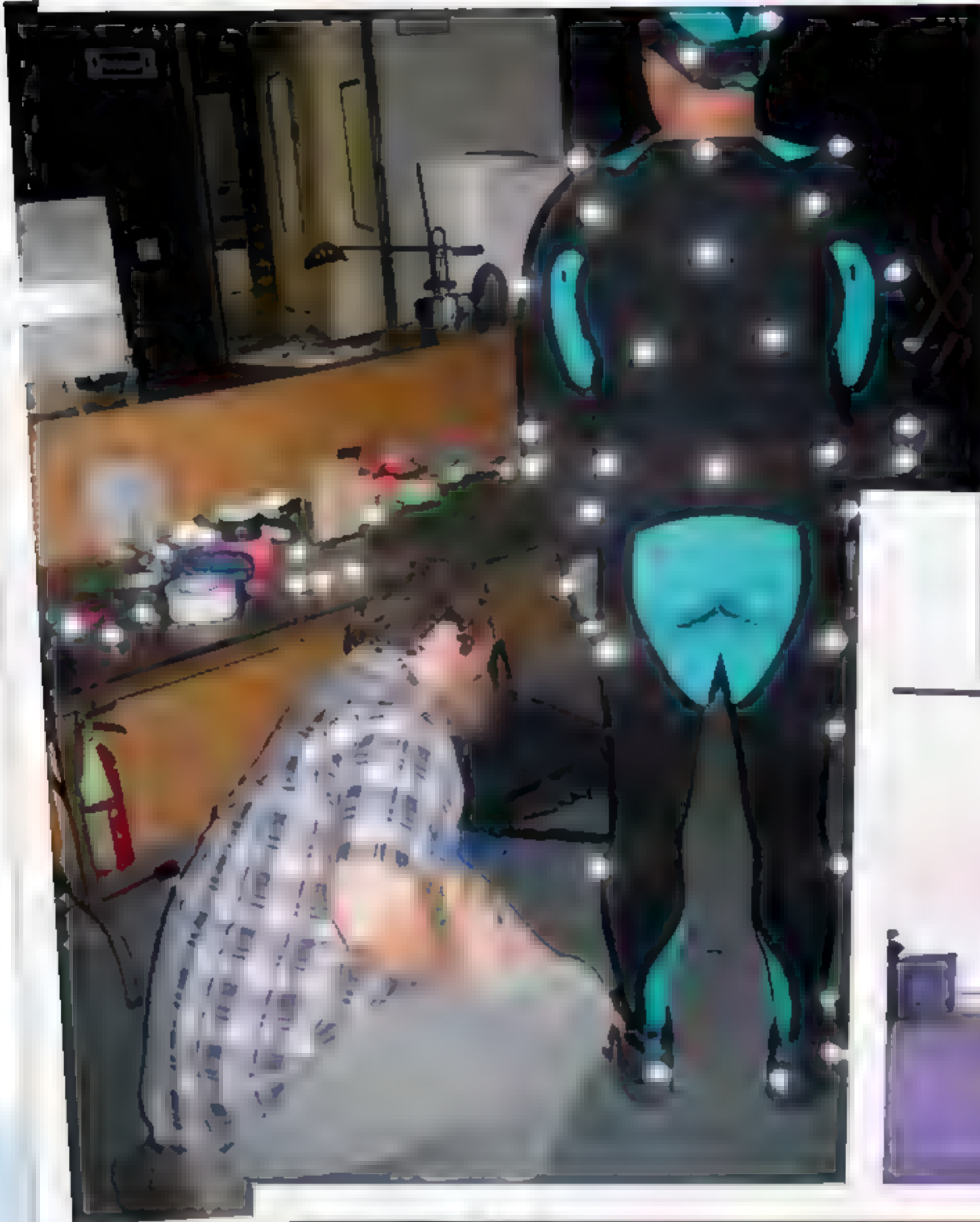
This was a period of intense growth for BioWare. In addition to Montreal, the Austin studio ballooned, and EA, for a short time, rebranded studios everywhere from California to Ireland to Fairfax, Virginia, where Mythic Entertainment became BioWare Mythic between 2009 and 2012.

"We went to other places because we thought we'd access different experience sets. People who had made different kinds of games," cofounder Ray Muzyka says. Montreal in particular had a pool of developers who had spent years developing AAA action games. BioWare saw the potential of bringing that experience to their more action-oriented RPGs, specifically the *Mass Effect* series.

After the release of *Andromeda*, BioWare Montreal became EA Motive. Many developers remained on the team and the studio's legacy persists, both within Motive and in studios throughout Montreal and well beyond.







By the time the studio started work on the game, 2005 was a big year for motion capture technology. The year's most significant development was the introduction of the Vicon system, which allowed for the capture of full-body motion in a single shot.

At the time, the studio was just getting started with motion capture. It was a new technology, and the studio was just getting started with it. The studio was just getting started with it.

So, the studio was just getting started with it. The studio was just getting started with it. The studio was just getting started with it. The studio was just getting started with it.





**BIO-TRIVIA**  
THERE WAS AN ALIEN  
CHARACTER CREATOR IN  
MASS EFFECT

The character creator in *Mass Effect* that allowed players to craft the look of their Commander Shepard was based on the tools that character designers used to create in-game characters. Under the hood, similar tools existed for designers to create aliens, including a variety of krogan, asari, and turian characters.

Sadly, for story and technical reasons, Shepard needed to be human.

"The aliens were actually much easier to animate than humans. As soon as you have something that's human, it's very difficult to make it look realistic. You see all the mistakes in everything," *Mass Effect* cinematic animator Jonathan Cooper says. "If you have some alien, you have nothing in real life to compare that to—they're actually much easier."



*Mass Effect 2* built on the success of the original, with ample buzz built through heavy anticipation in games media and tie-in stories, including novels by *Mass Effect* lead writer Drew Karpysyn.



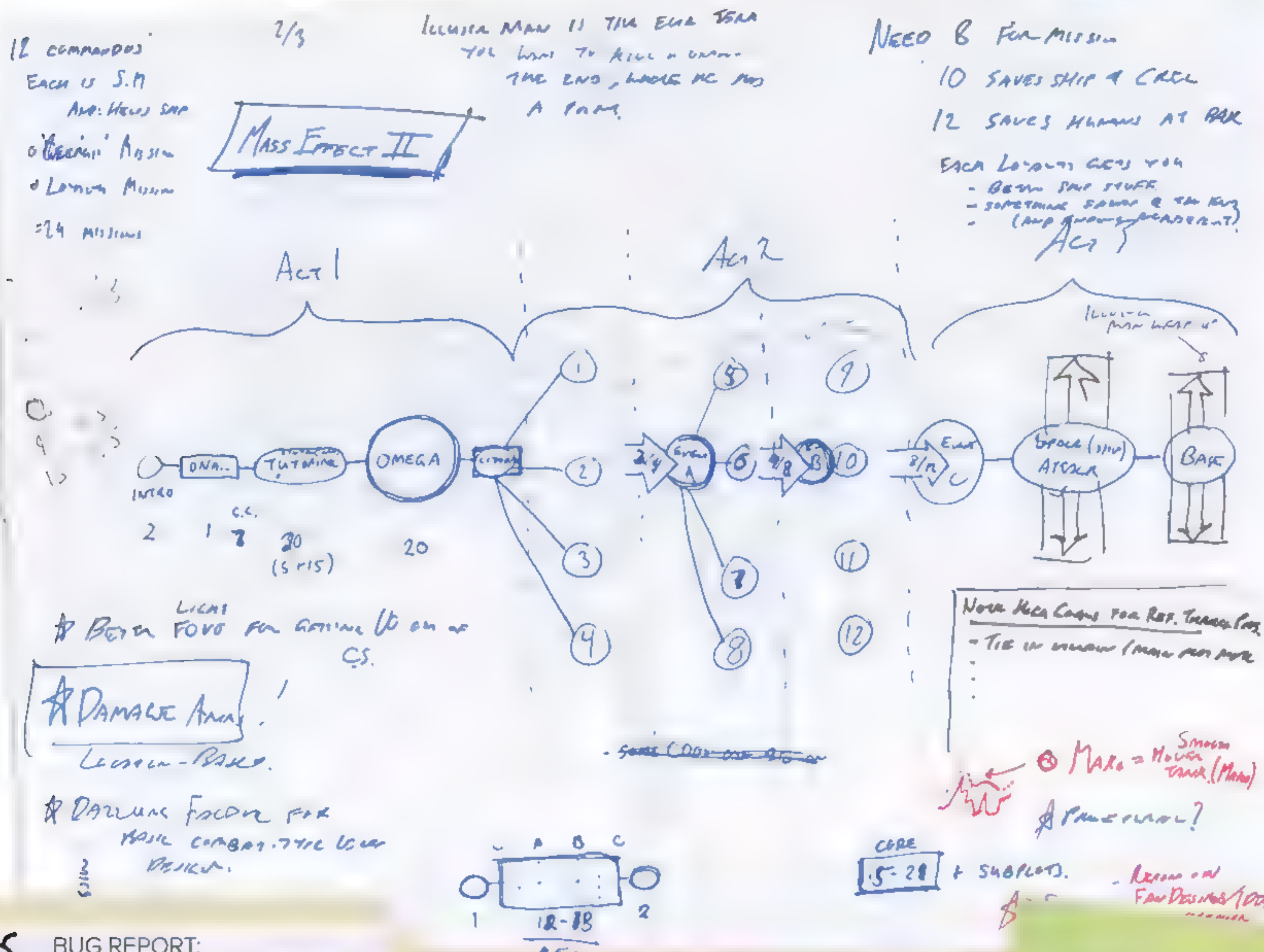
## NOTES ON MASS EFFECT 2'S STORY STRUCTURE

FOLLOWING THE SUCCESS OF *Mass Effect*, BioWare got to work creating a follow-up that would introduce a new villain and squad mates, while presenting a story that encouraged players to explore the galaxy a little more than in the first game's race to save it.

The team decided on a sort of *Dirty Dozen* concept, where Shepard faced what could be a suicide mission. The Illusive Man would give players leads on potential squad mates to recruit, bettering the chance at success. It turned the recruiting of

characters into a kind of collection mechanic, where players would not only recruit but also work to earn the loyalty of a ragtag group of spacefarers.

"The final mission would play out very differently depending on how you prepared earlier in the game," project director Casey Hudson says. "Over the Christmas holiday of 2007, I worked out a diagram on a single piece of paper that would define the entire scope and structure of the game."



### BUG REPORT: A SHOTGUN SO POWERFUL IT DESTROYS TEXTURES

**Release:** *Mass Effect 2*

**Priority:** 2 (Moderate)

**Description:** A shotgun fires a spray of pellets with each trigger pull. At a certain point in *Mass Effect 2*'s development, the damage meant to be dealt by the blast as a whole was applied to each of the pellets. Shotguns in *Mass Effect 2* were so powerful, they shot the textures off any enemy unlucky enough to be on the receiving end of a blast.

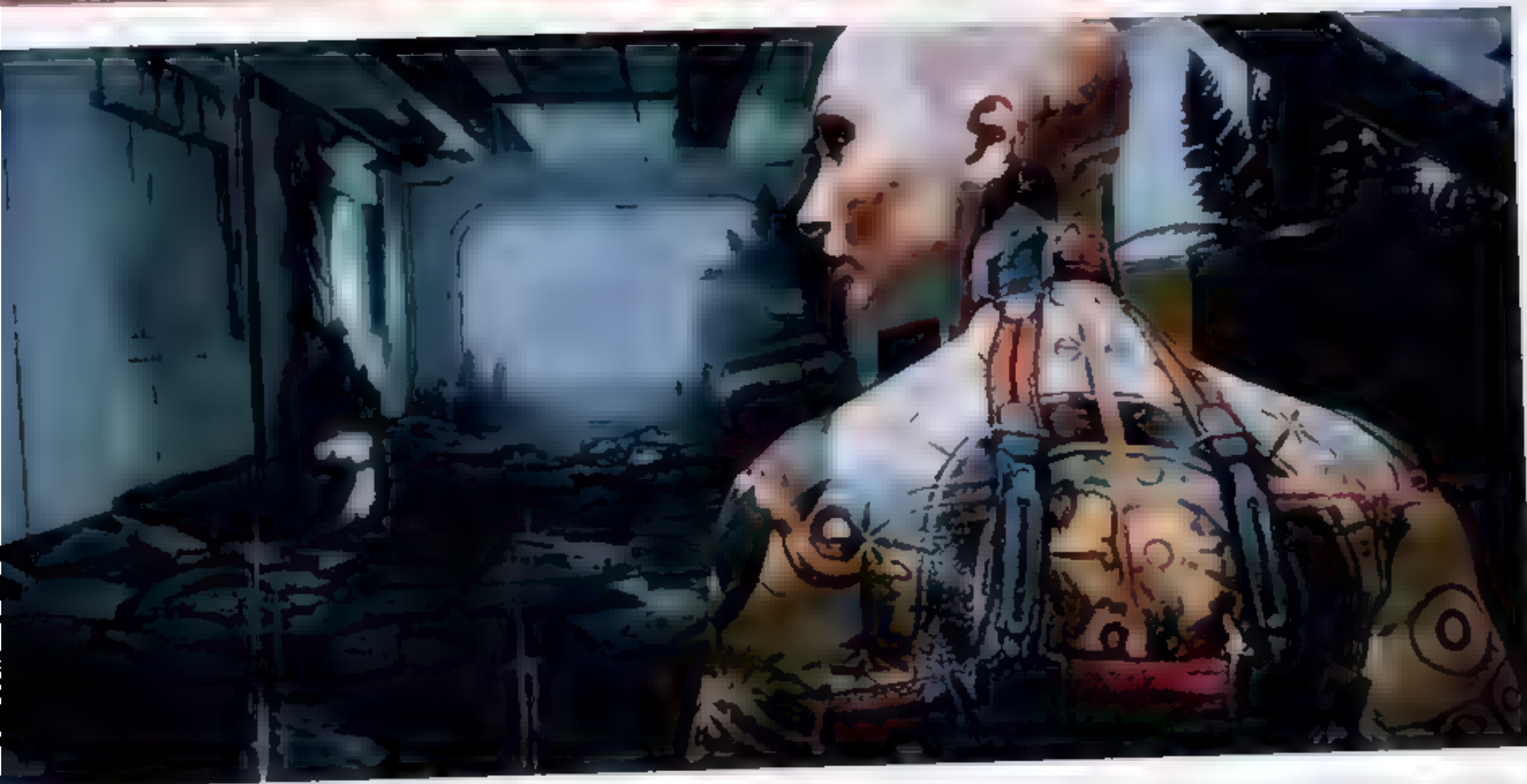


"I shot a krogan so hard that his textures fell off and he got the checkerboard default Unreal texture," *Mass Effect 2* quality assurance tech Baldwin Li says. "It was pretty amazing."





"We rewrote chunks of Jack two days before she went to final Vo," senior writer Luke Kristjanson says. "Jack's voice was the only one we could change, because all the other NPCs were already recorded. We helped Jos [Hendriks] redesign her mission by juggling locked NPC lines, and changing Shepard's reactions by rewriting the text paraphrases to change the context of the already recorded Vo."







## HIDDEN MEANING IN ME2 DISTRESS SIGNALS

WHEN CALLED UPON to dream up seemingly random numbers for game systems, writers will wedge in all sorts of references. See if you can guess the obscure nods Luke Kristjanson snuck into these distress calls in *Mass Effect 2*:

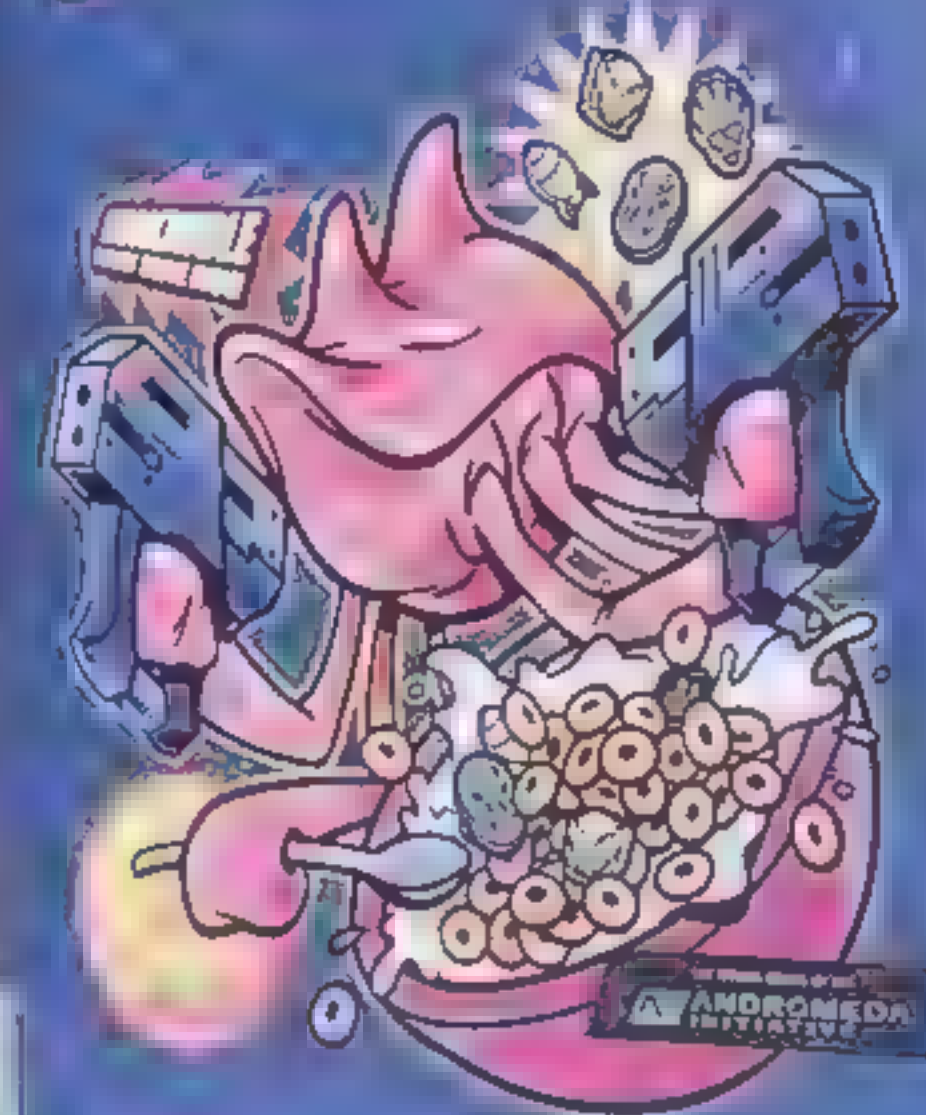
1. General distress. MSV Hugo Gernsback, registration BW46-10034-087. Impact and unscheduled sub-orbital deceleration recorded.
2. Fault in beacon protocol 90-35768-TTJ. General distress alert triggered by unspecified incident. Status is not known.
3. General distress. Beacon auto process recovered from unspecified fault, GMOP-65000. Status of system operator is not known.
4. General distress. Beacon auto process interrupted at parse point GLR-21-12. Unspecified incident. Unspecified user.

### SOLUTIONS

1. BioWare's initials and Edmonton phone number backward
2. Initials and backward phone number from Tommy Tutone's "Jenny"
3. Initials and numbers from Glenn Miller Orchestra's "Pennsylvania 6-5000"
4. Initials and numbers from Geddy Lee and Rush's "2112"



# BLAST-OHS



Blast-Ohs is a fictional cereal created by Luke Kristjanson, a writer who was first mentioned in *Mass Effect 2*. Though the character was meant to be one step away from being a Spectre, Blast-Ohs' popularity among fans prompted the developers to bring the character back for *Mass Effect 3*. The Andromeda Initiative cereal was invented to promote the initiative itself. Blast-Ohs 9-11 is a community term even went so far as to create a box for the cereal and a meal kit to help promote the game.





## A GAME WORTH A MILLION WORDS



### KEY FACTS DRAGON AGE: ORIGINS

#### RELEASE DATE:

November 3, 2009

#### GENRE

RPG

#### PLATFORMS:

Xbox 360, PlayStation 3,  
Windows, Mac OS

Developed in Edmonton

Published by Electronic Arts

**BIOWARE RETURNED TO HIGH FANTASY** with the release of *Dragon Age: Origins* in the fall of 2009, roughly seven years after the release of *Neverwinter Nights*. *Origins* had actually been in development for seven years, double the length of a typical development period.

Its earliest iterations were much closer to the Dungeons & Dragons lore and mechanics BioWare was so used to. As development progressed, and the project endured several shifts in personnel and direction, *Origins* grew every step of the way, ballooning in scope to include more than a million words of text, a number BioWare hadn't touched since *Baldur's Gate II*.

#### BUILDING THE WORLD OF THEDAS

As one of the first developers on *Dragon Age*, writer David Gaider was tasked with creating the entire world and everything in it from scratch. David had just finished work on the second *Neverwinter Nights* expansion, *Hordes of the Underdark*.

"James Ohlen came and told me that BioWare was planning two new games. One would be fantasy and one would be sci-fi," David says. The idea was these would be their own intellectual properties. David was put on the fantasy property. James, the game's lead designer, gave David a historical atlas and set him loose, saying, "Go make D&D but not," David says. "I spent the first six months kind of holed up making the world."

He started with a question: What are the things they didn't like about D&D? The things they wished they could change if they could?

"I didn't like that the world of D&D has all this magic, but the setting doesn't acknowledge that it exists," David says. "Every first-level magic user has Charm Person. If you meet a mage and like them, you immediately should wonder if they are charming you."

This is where the Circle of Magi came from, and it's a central conflict between magic users and

non-magic users that helped define the setting's politics.

Initially, mages couldn't use offensive magic. But BioWare cofounder Ray Muzyka always plays mages, and when he got his hands on an early build, one of his first questions was: "Why can't I cast Fireball?"

James, meanwhile, wanted an evil horde—some group of monsters that would provide a consistent threat for players. Enter the darkspawn; and from this army of undead, a more global threat came into being in the form of the Blight.

David's approach to building Thedas was to write well beyond what would appear in any one game. He not only named each nation in Thedas but defined its culture, its history, and how it fit into the world. The player might never go to a place as far from Ferelden as the Tevinter Imperium, but David wanted to know everything about the Imperium anyway. It would make the world feel more real.

Over time, the setting became less focused on gritty, bloody fantasy akin to *Conan the Barbarian* and more varied, based on the specific cultures found within Thedas.

#### DAVID GAIDER'S SIX-MONTH RULE OF NAMING

For a long time, *Dragon Age* was known internally as "Chronicle."

When it came time to decide on an outward-facing name, James set about creating a formula to draft the ideal title. There would be two lists, each with words that imply *fantasy*, like "sword," "age," "iron," and "dragon." James combined the words using a program and had everyone on the project vote for their favorite combinations.

Eventually, the team decided on *Age of Dragons*.

"That was great, except the original version of the lore didn't have dragons. I had to go and bring the dragons back. Resurrect them in the lore," David says. "In a very tail-wagging-the-dog kind of way, I





had to justify the existence of this name in a game where originally there were no dragons."

"Age" also meant an emphasis on the specific era in the setting's history. The game, and presumably future titles, would need to be set in the Age of Dragons.

When *Age of Dragons* proved too similar to other games already on the market, they flipped the words: *Dragon Age*.

The name for the *Dragon Age* setting came about another way. "Thedas" was shorthand for "the *Dragon Age* setting" on the forums and internally, and the design team fully intended to name the continent something else in the final release. James initially floated the name "Pelledia." But the team figured there was no rush. "Thedas" would work well enough temporarily.

Enter David Gaider's first rule of naming: if a temp name has been around long enough and is not actively terrible or offensive, after six months, people won't be able to think of it by any other name.

That's what happened with Thedas. The team had a big meeting to try to come up with a better name for the continent. But in the end, nothing sounded right except Thedas.

The same happened for the Grey Wardens and the Qunari.

The Grey Wardens were an ancient order of blood-bound warriors tasked with protecting Thedas from a looming evil. To some team leads, "Grey Wardens" didn't sound epic enough. "It was put to a team vote. I believe the alternate suggestions were Blood Knight Brotherhood, Lords of War, and Disciples of Pain," *Origins* editor Karin Weekes says. "The first two got one vote each, Disciples of Pain didn't get any, and everyone else voted for Grey Wardens."

Meanwhile, "Qunari" seemed like a silly name for a race of towering horned people who follow a strict social order as dictated by their religious text. Others on the team thought it sounded like *canary*, David says.

But because it was the temp name for the group for more than six months, it stuck.

"When we brought up that it was time to rename the Qunari, they asked why? They said: 'They just seem like Qunari to me,'" David says.

#### THE LANDSMEET VS. MARY KIRBY

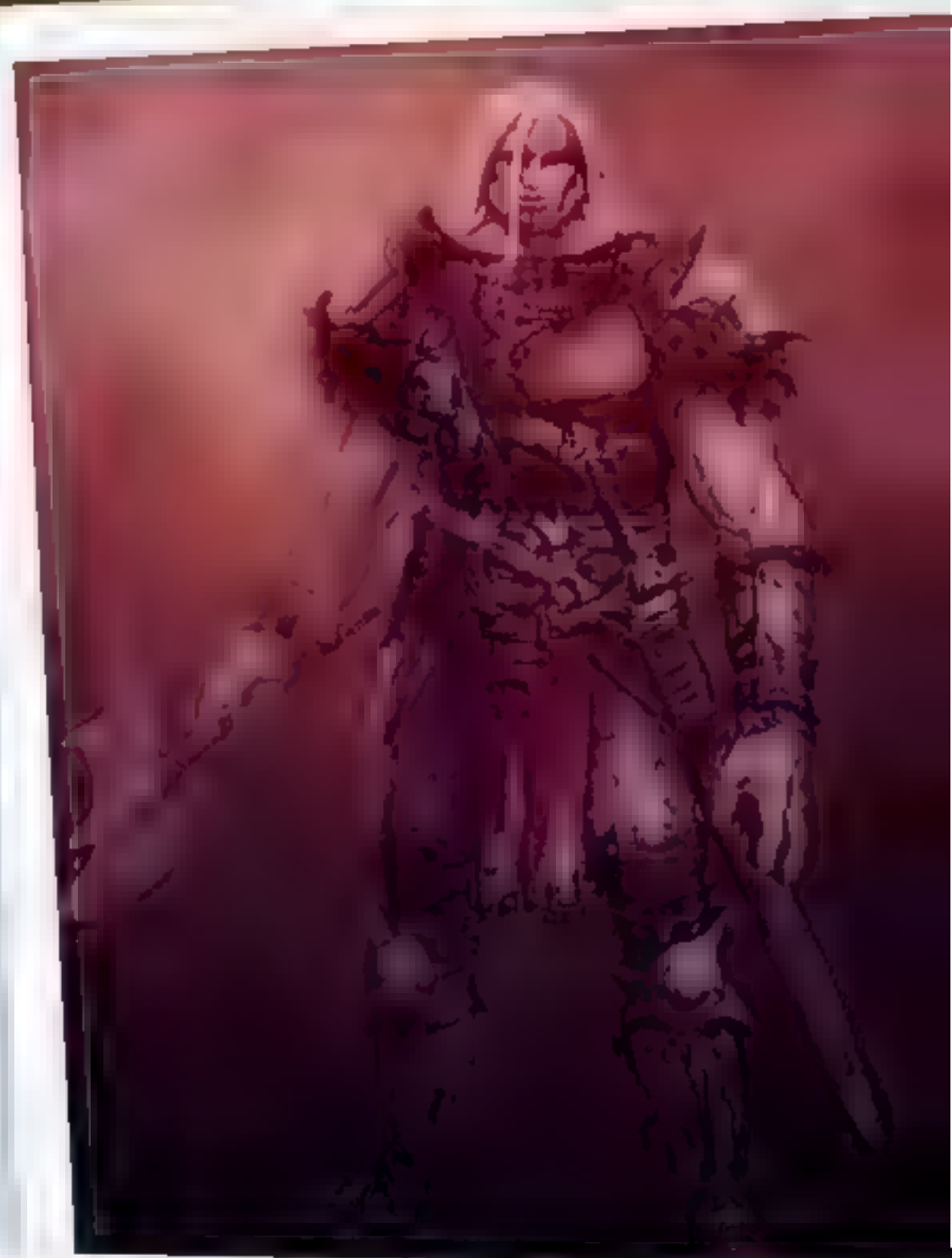
The scope of *Dragon Age: Origins* led to some variable gymnastics when it came time to pay off any choices players had made throughout the game. In addition to choosing the player character's origin, which included being able to play as a human, elf, or dwarf, players were given massive power over the direction of the story, directly affecting the future of issues as key to the setting as mage-templar relations and the fates of entire factions.

All of the player's critical path decisions came to a head, though, in a single conversation at the Landsmeet.

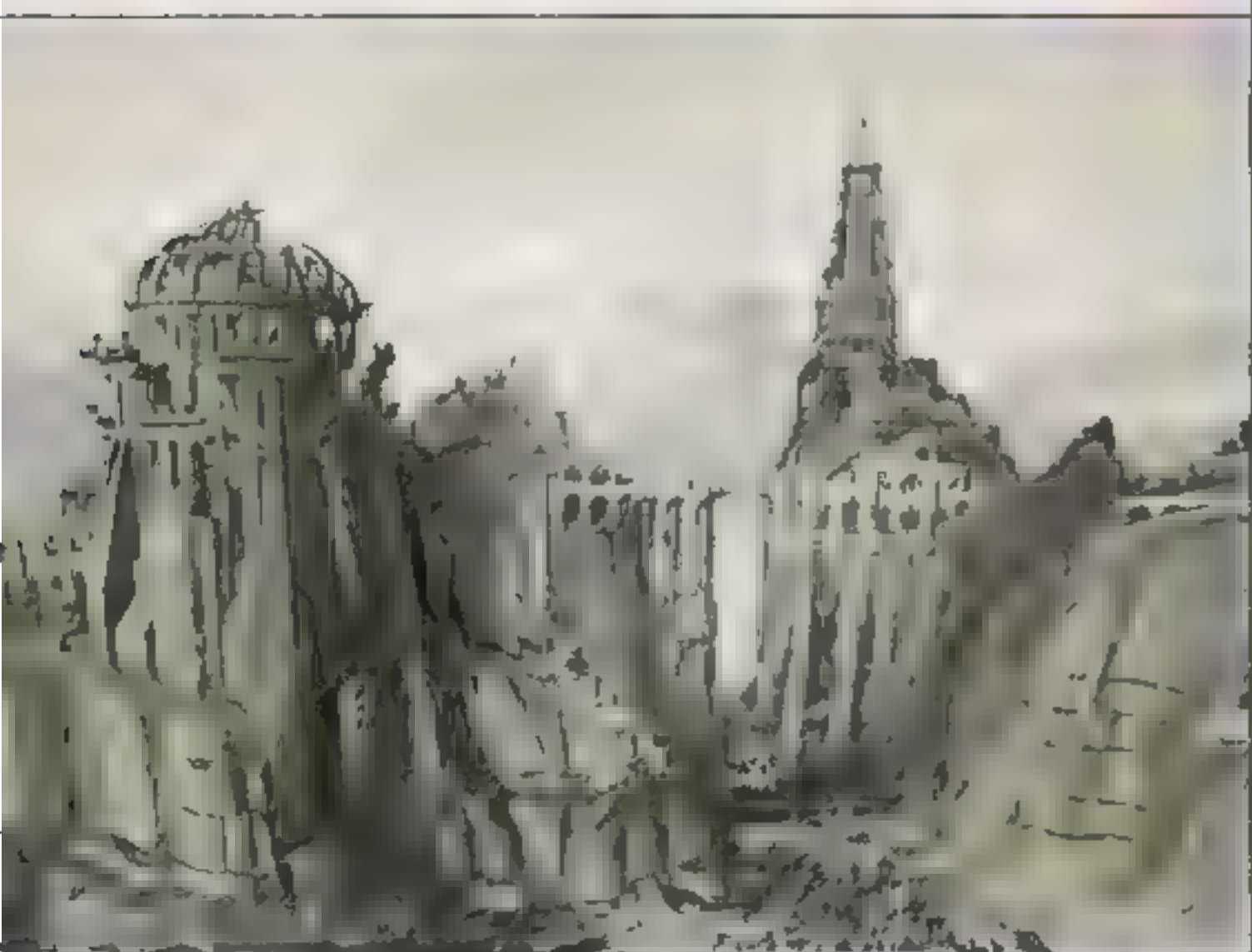
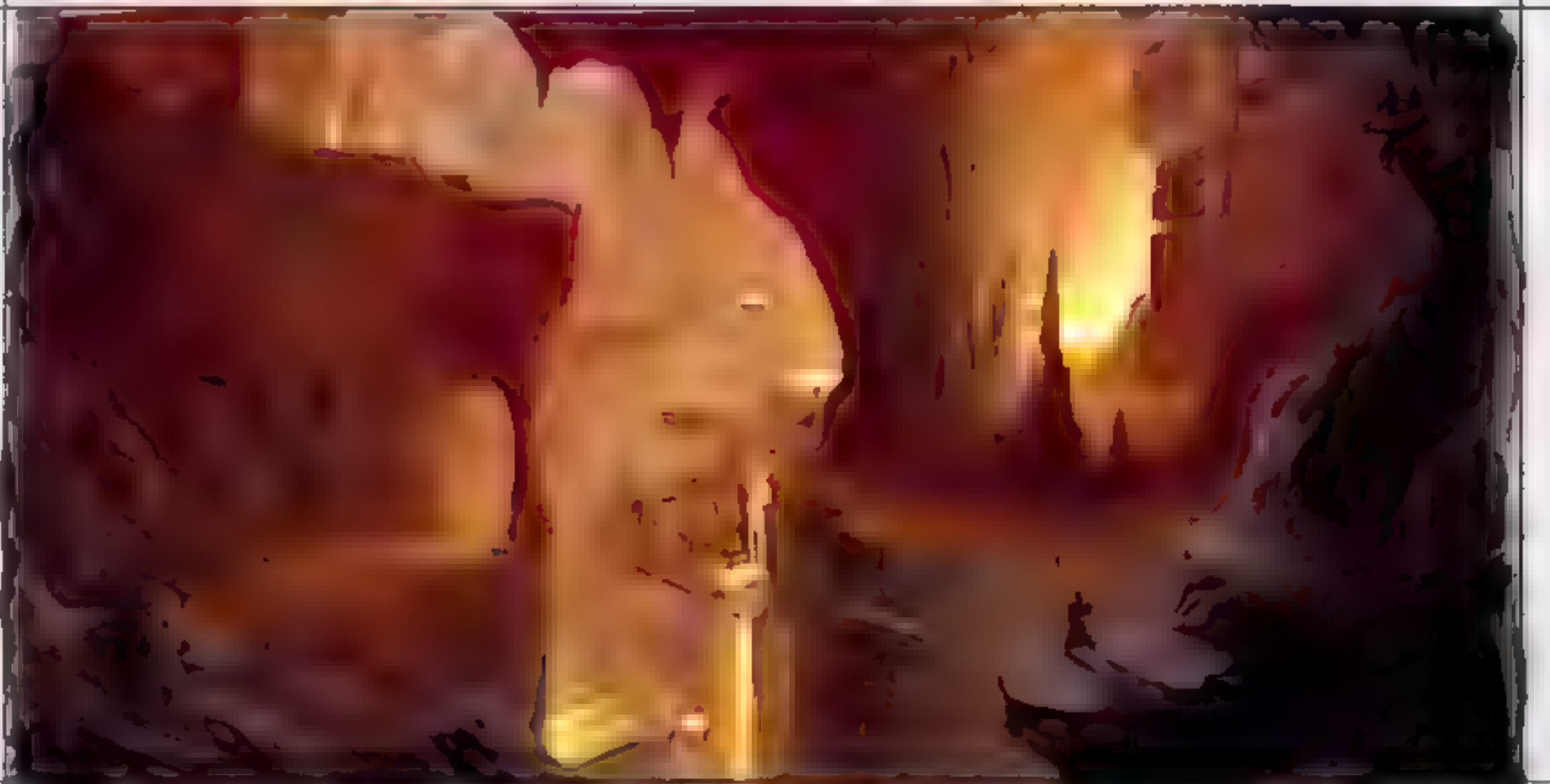
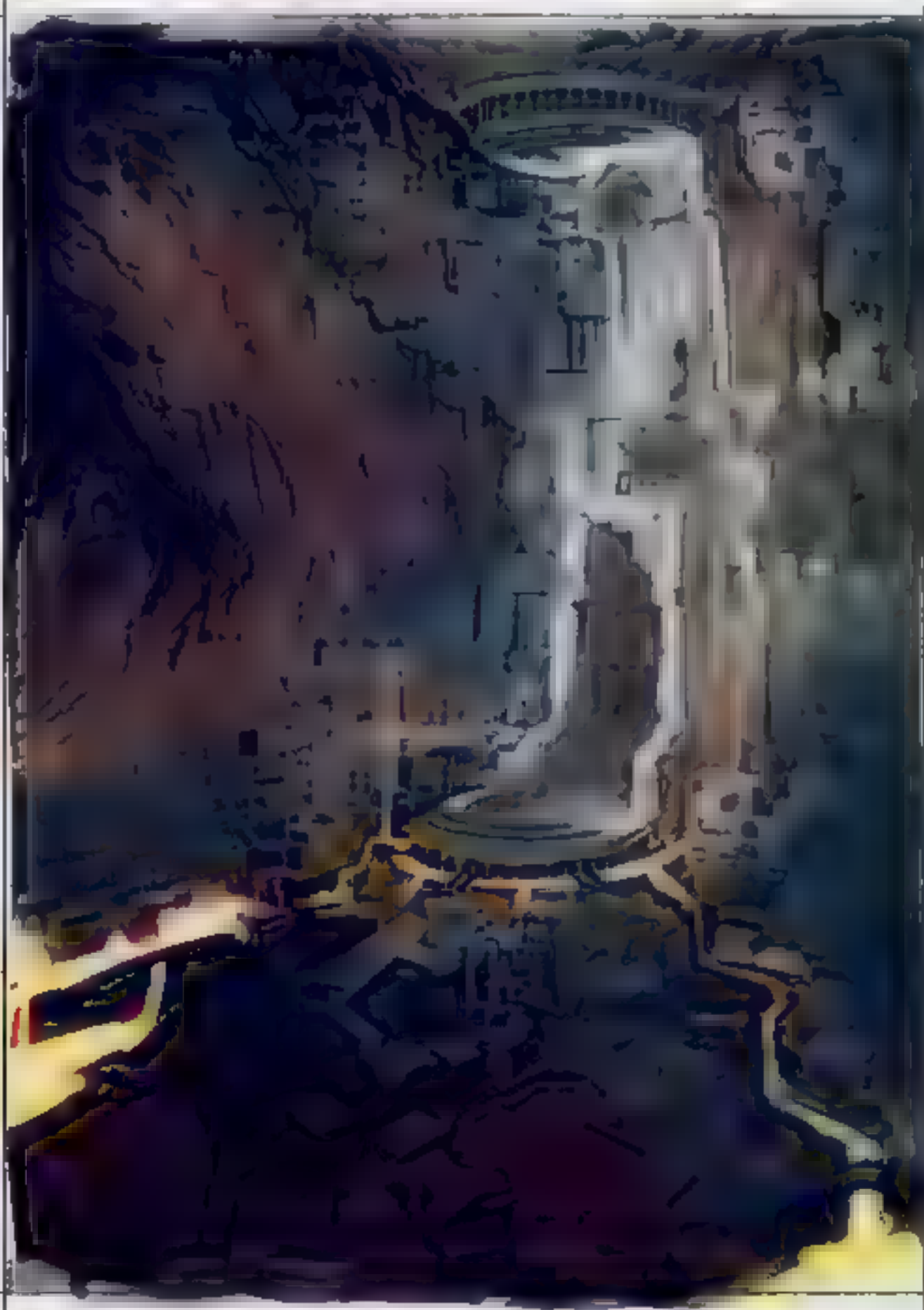
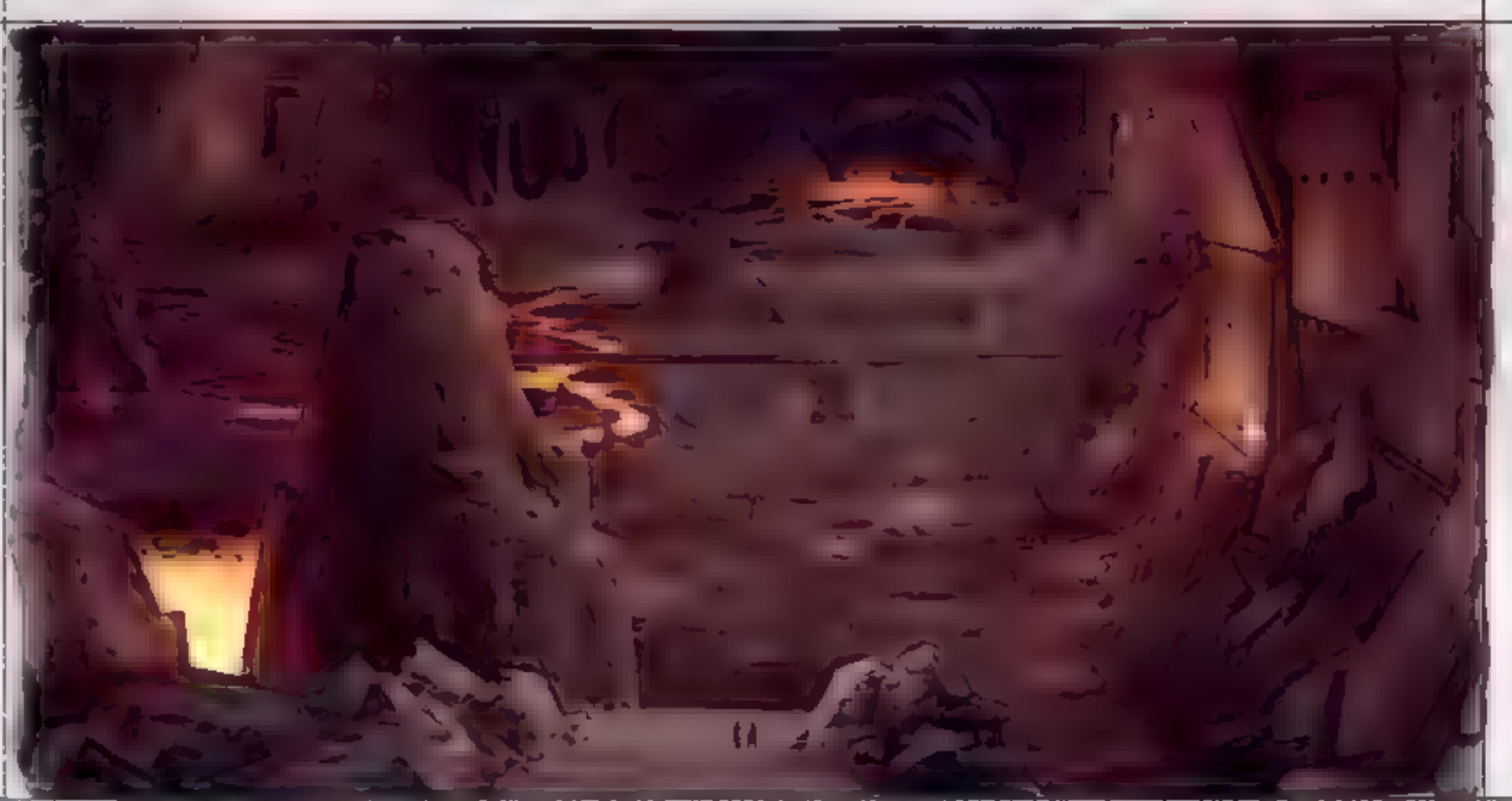
"Nobody to this day understands how the Landsmeet works, except possibly for me," says its writer, Mary Kirby. "If I'm really, really drunk, I can explain how the Landsmeet works."

In the conversation, players decided whether or not to kill Loghain, a Fereldan traitor who had used the Fifth Blight to all but usurp the throne. Decisions made throughout the game allowed the player more options for what to do with him, including forcing him to join the Grey Wardens. Ripple effects from the Landsmeet would determine the fates of other major characters as well, including Alistair and Queen Anora.

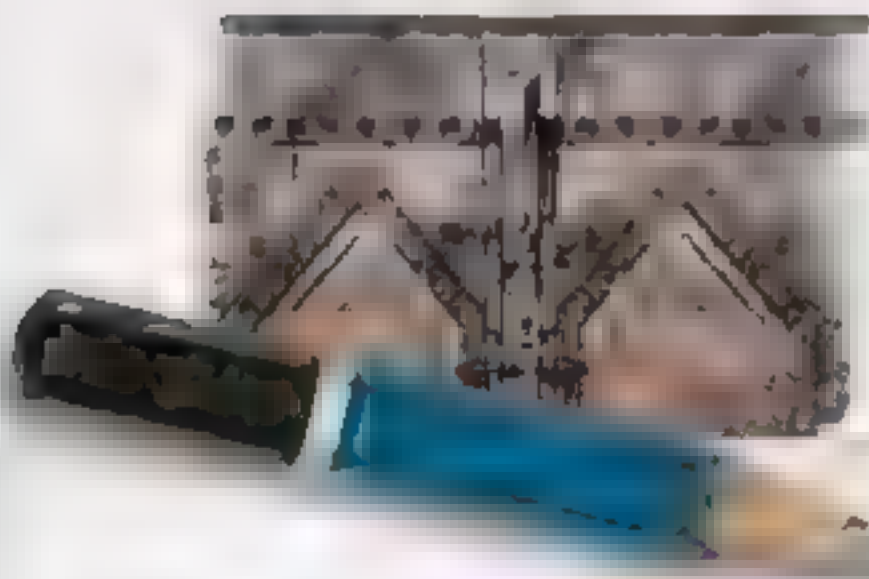
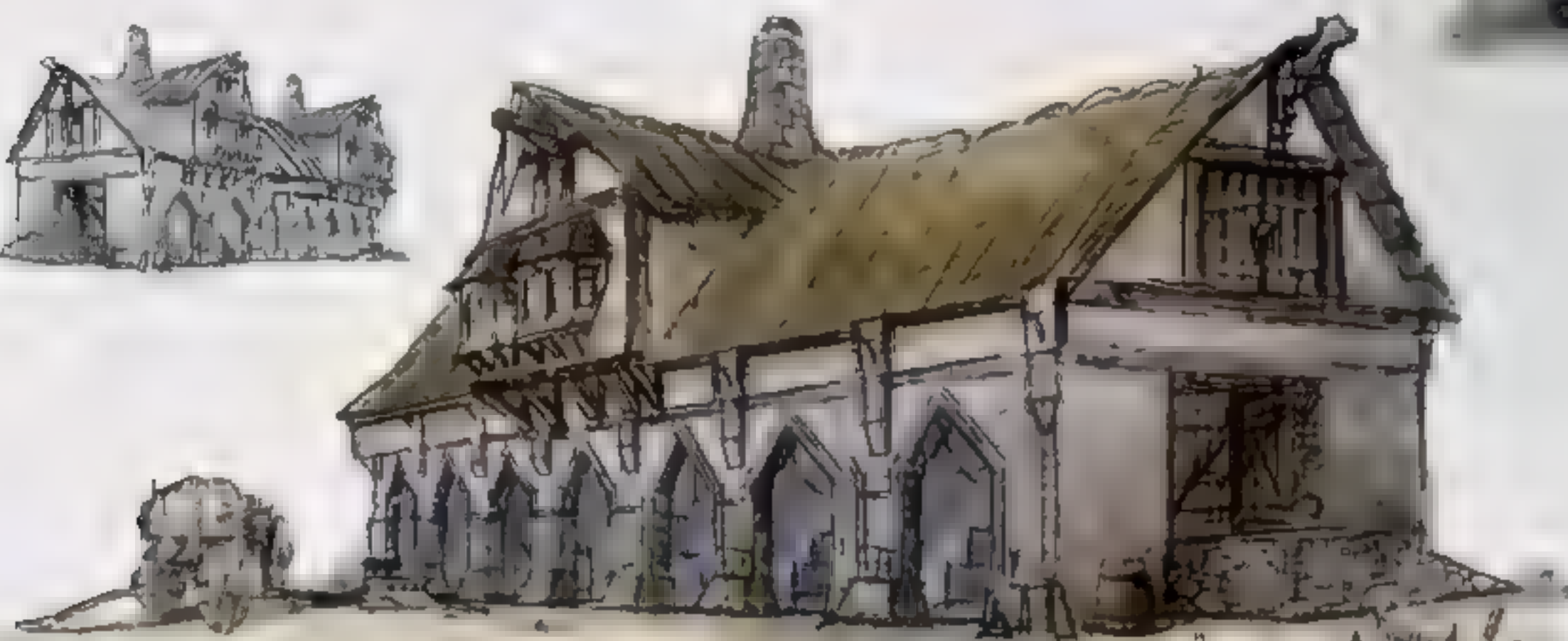
"All of those things got paid off in an extremely long conversation," Mary says. "There were as many words in the Landsmeet scene as in all of Sten's conversations."















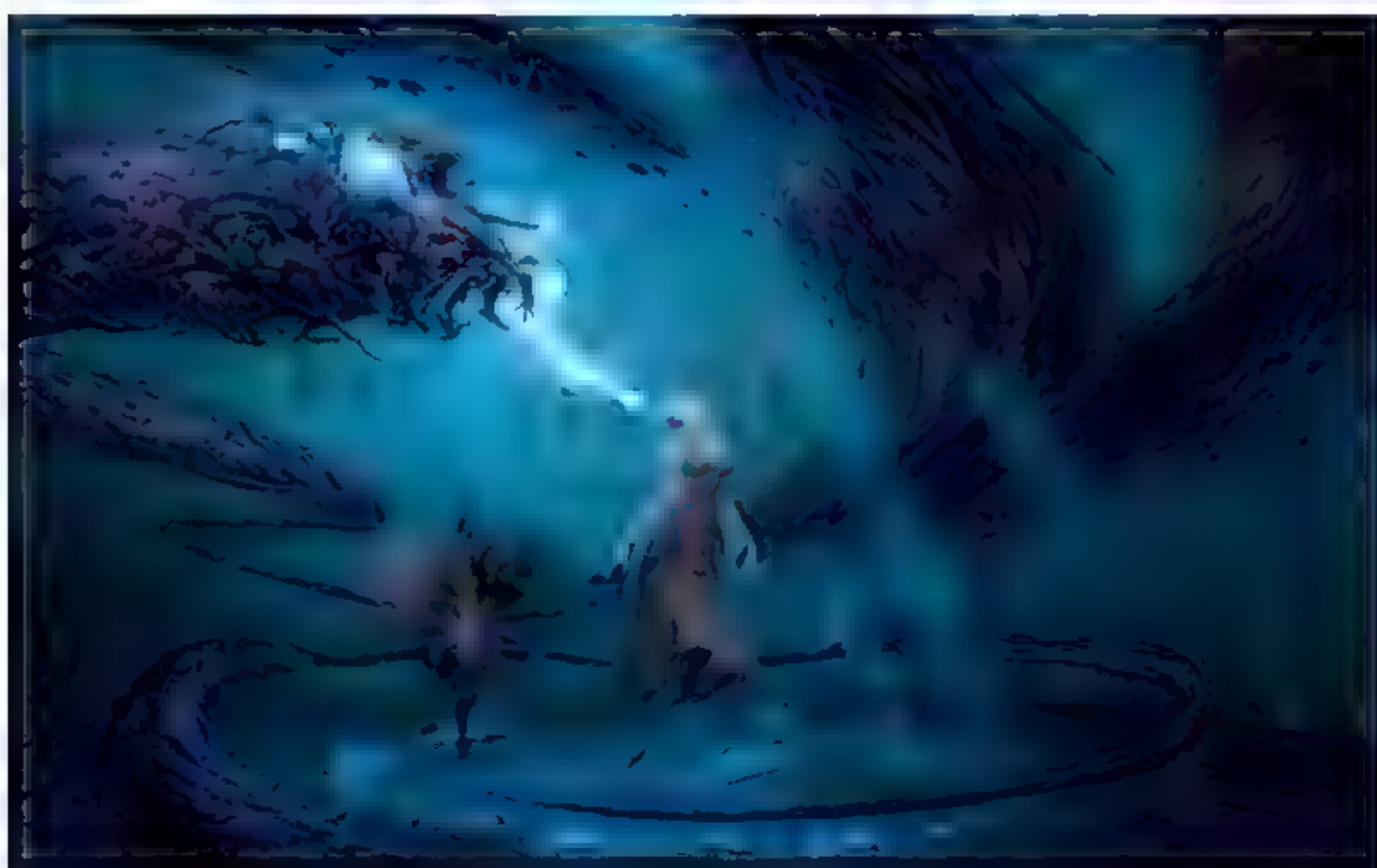




These character concepts show how BioWare's concept art methods have changed toward something more utilitarian. Oghren's painting here gives an impression of a character, but it's harder for a character artist to use the concept to build a workable 3D model in game.

"As pretty as your concept art may be, it's better to have a blueprint that makes it into the final game," *Dragon Age* franchise art director Matt Rhodes says.









## REAL TALES OF DEVELOPMENT: **THAT TIME BIOWARE BOUGHT PLANE TICKETS FOR COMPUTERS**

ON A PRESS TOUR through Europe in 2009 to promote *Dragon Age*, BioWare devs showed up at an airport gate with a bunch of PC equipment used to demo the game—too much PC equipment to clear carry-on baggage limits for the airline. Unable to check the equipment, which contained industry secrets, former BioWare general manager Aaryn Flynn says they came up with another way to get the PCs on the plane:

Greg had to buy seats on the plane to accommodate all the PC equipment because they decided that they weren't allowed to carry it on. He had to take his credit card out and say: "I'll just buy the seats. Just give me more seats in the plane." And they said: "Well, we can't process that here." And he said: "Where can we process it? Just take my credit card. Let's buy some seats!"



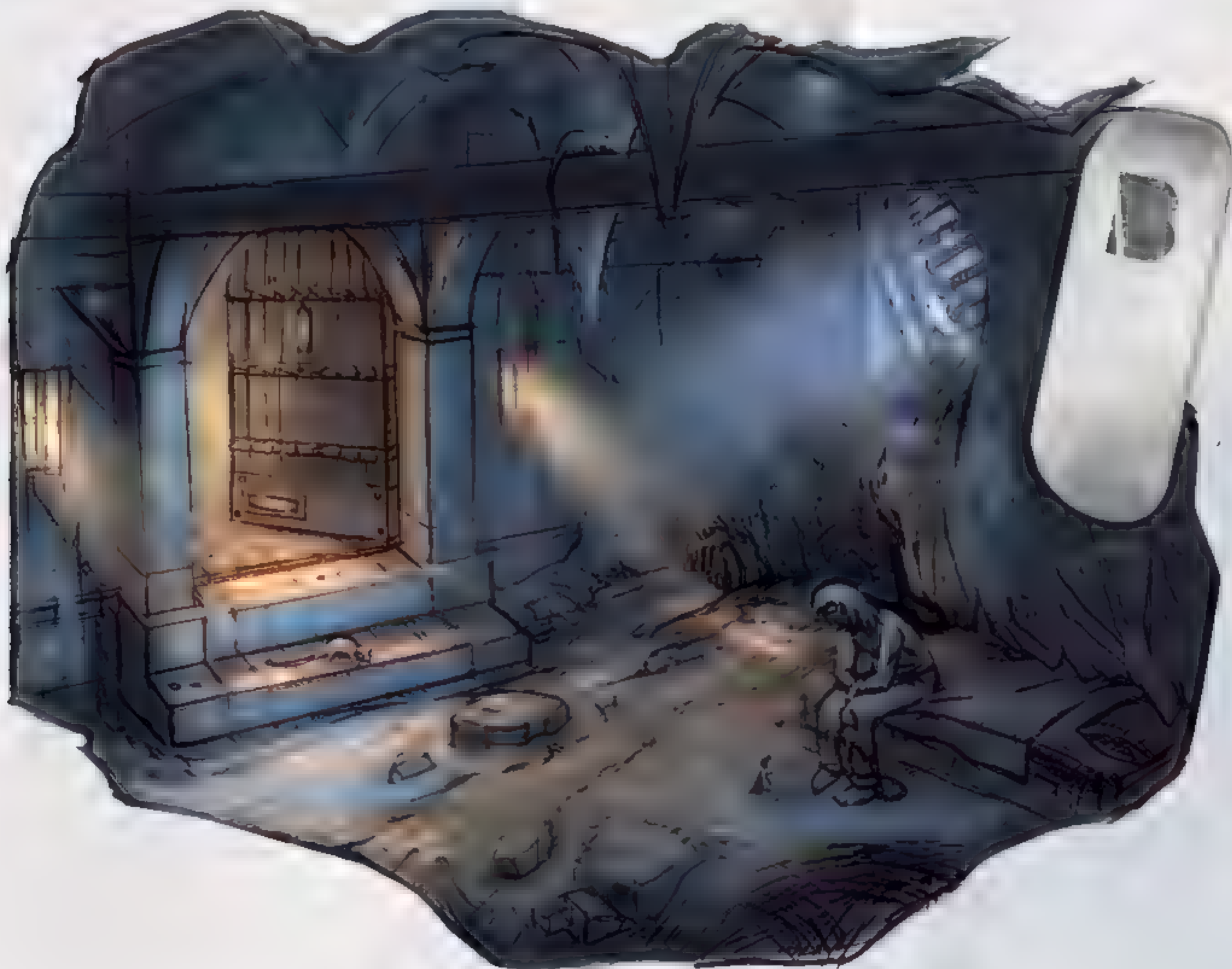
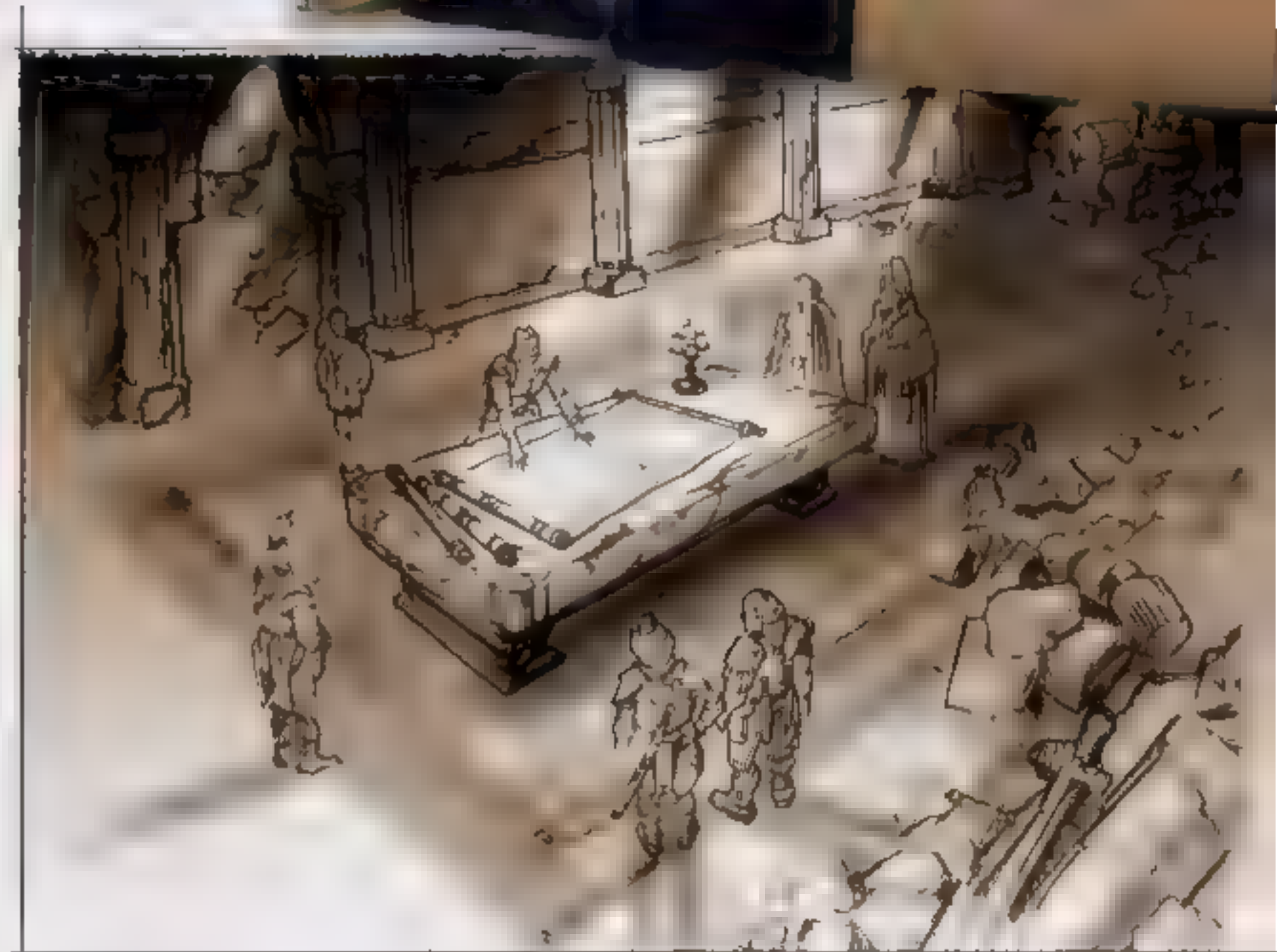




Costumes are a critical part of the visual storytelling in fantasy. "Putting the details and thought into costume design is always worth it," Dragon Age franchise art director Matt Rhodes says.



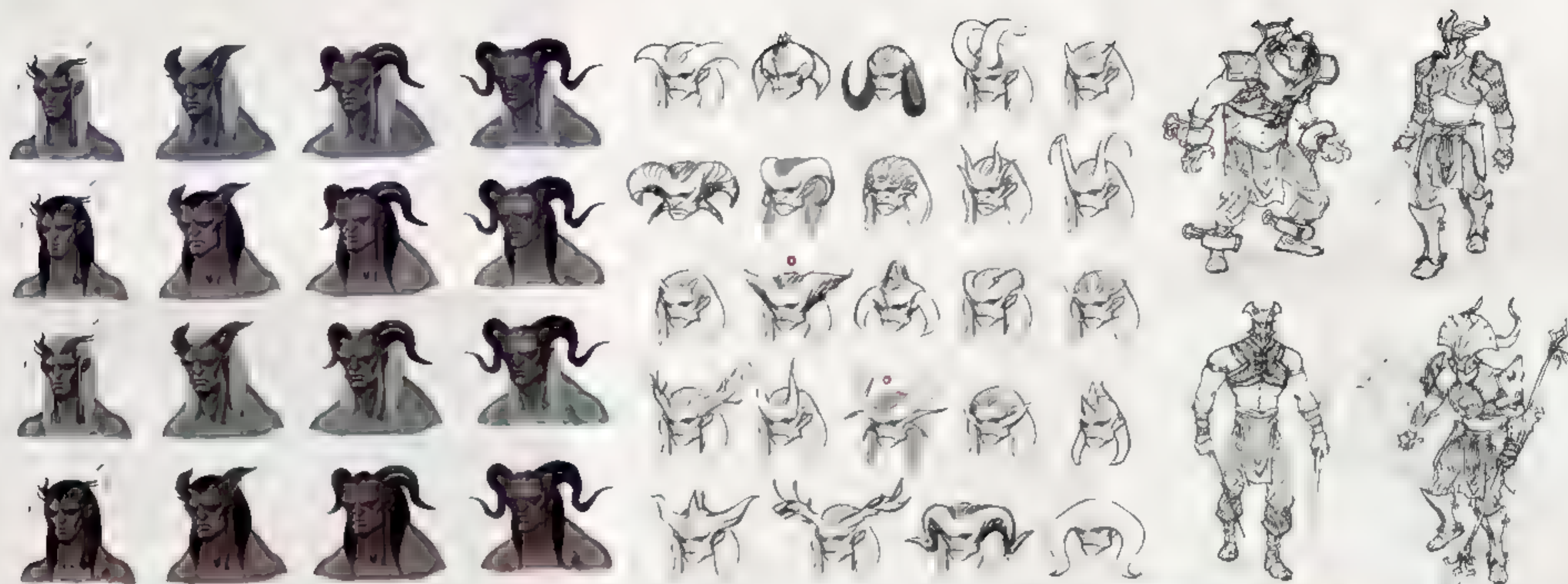




Even with its technical limitations, *Origins* presented a massive fantasy world brimming with castles, cathedrals, and tombs.





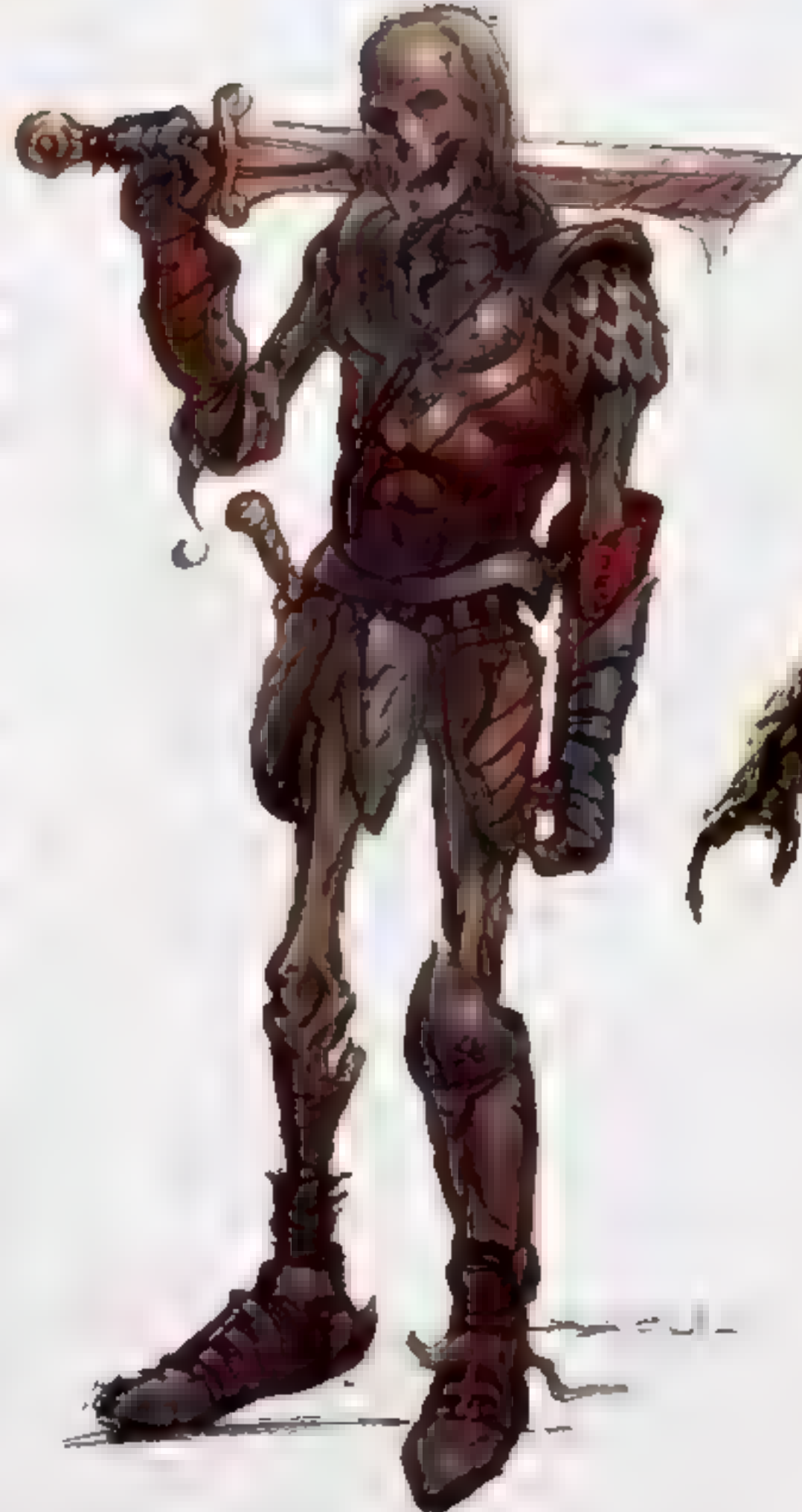


For *Origins*, the Qunari were limited to Sten and a couple of drawings meant to just begin exploring what the people looked like.

Sten was initially supposed to have horns, but it was too much of a challenge to add with the game's customizable armor sets. The team wrote into the lore that Sten was the rare Qunari without horns to explain these limitations. In *Dragon Age II*, the team opted to forgo customization in order to give the Qunari horns. The bottom concepts show how the Qunari design evolved in *DA II*.









## A VERY BIOWARE LOVE STORY

NERDY PROPOSAL MAKES THE PAPERS

**"I HAD TO GO DOWN INTO THE DEPTHS AND GET GOLD AND DIAMONDS AND BRING IT BACK UP—AND LAVA—TO MAKE THIS GIANT RING, AND THEN MAKE THE WORDS OUT OF THE LAVA."**

—AUDIO DESIGNER JOEL GREEN

PRODUCER HEATHER RABATICH and audio designer Joel Green are one of many couples to meet at Bioware over the years. The pair met in the kitchen on the second floor of BioWare Edmonton, two smart weirdos in a studio full of smart weirdos.

"What I found, just even in the friendships that I made there, was people funnier than I'd ever met, with so many interesting and diverse backgrounds. People from all over the world, everybody who's really passionate about what they do," Heather says. "You make amazing friends there, but also the potential for partnership is really wonderful, finding people that you really just connect with on all these different levels."

When it came time to get engaged, Joel decided the best way for the two avid game players to do it would be in an actual video game. So he got to work crafting a ten-story-tall diamond ring in *Minecraft*, a voxel-style world-building game that you may have heard of. Back then, *Minecraft* was still in beta. The couple had just started playing in survival mode, building a fortress together.

"I had to go down into the depths and get gold and diamonds and bring it back up—and lava—to make this giant ring, and then make the words out of the lava," Joel says. The lava spelled out "MARRY ME."

Joel built a little pathway through their fortress with signs leading Heather to the ring. When Heather walked the path, she remembers almost falling off.

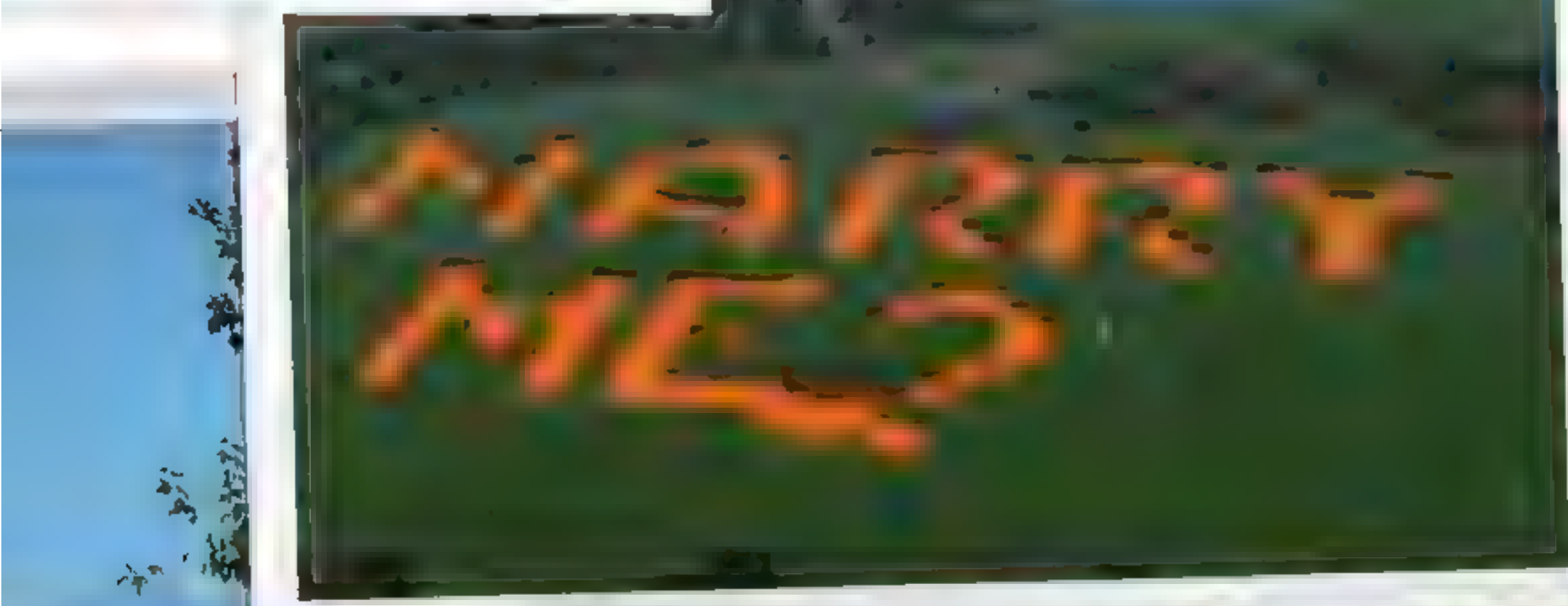
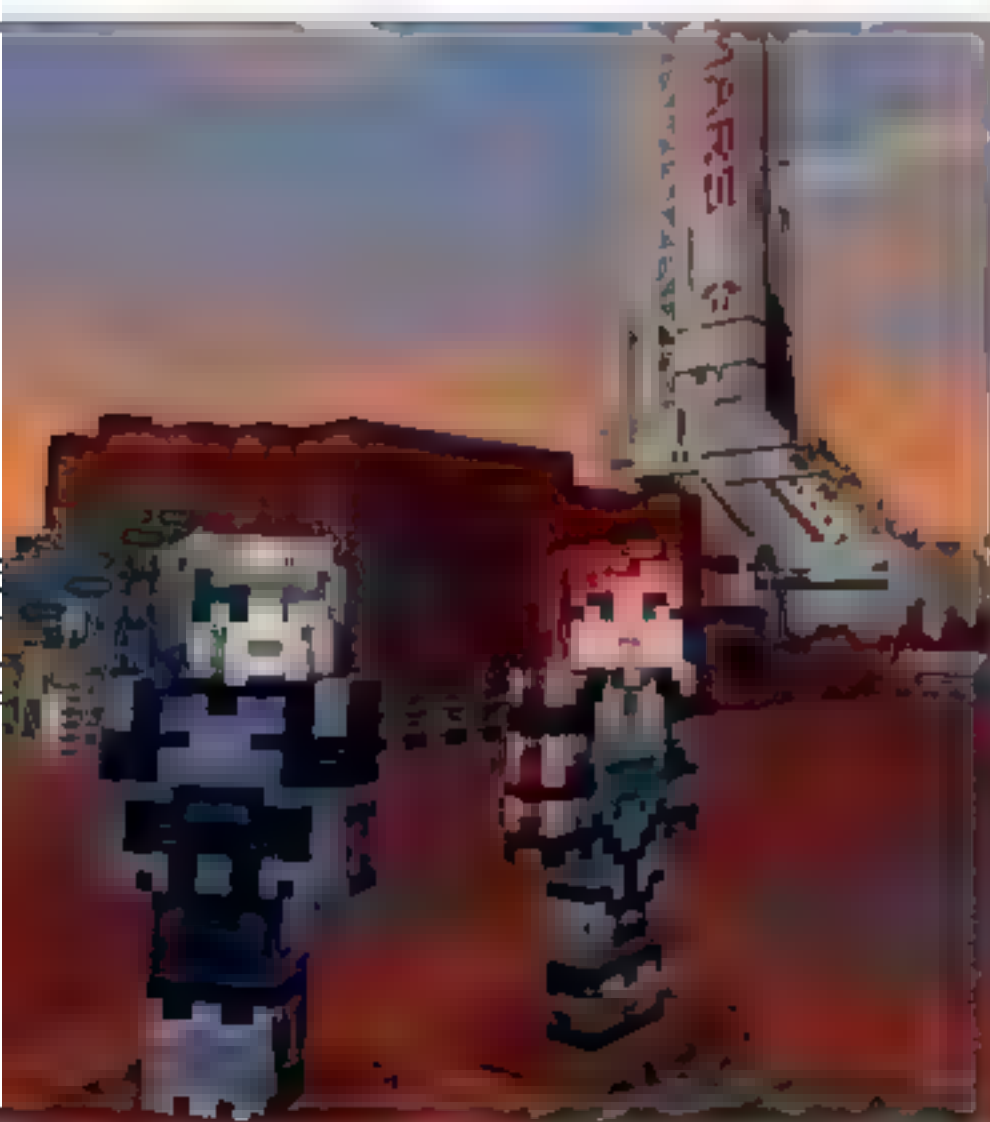
She knew something was up before she sat down to play that day. Joel was hovering. And he'd been acting weird for a while. "He talks in his sleep," she says, "and about a week before he had said, 'Will you mar mar?'"

Still, she was floored when she reached the ring.

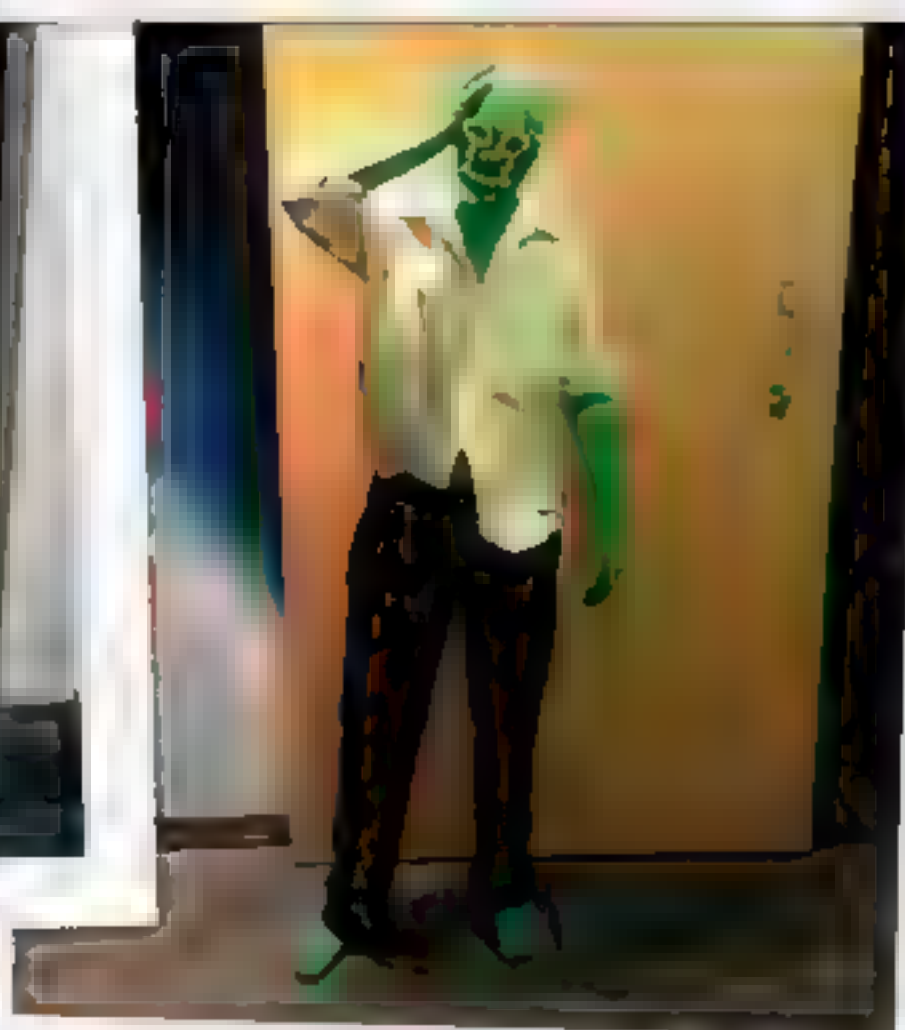
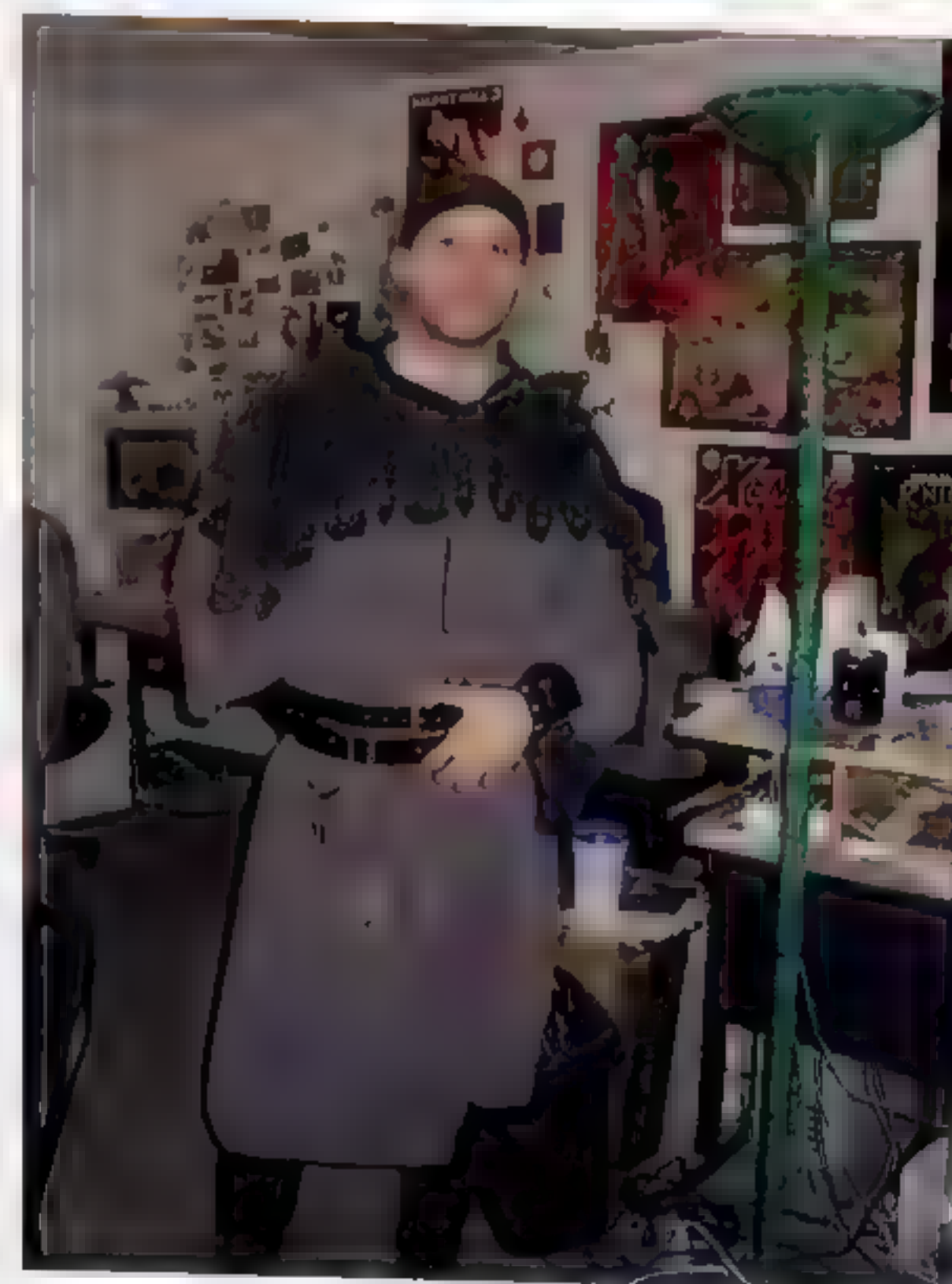
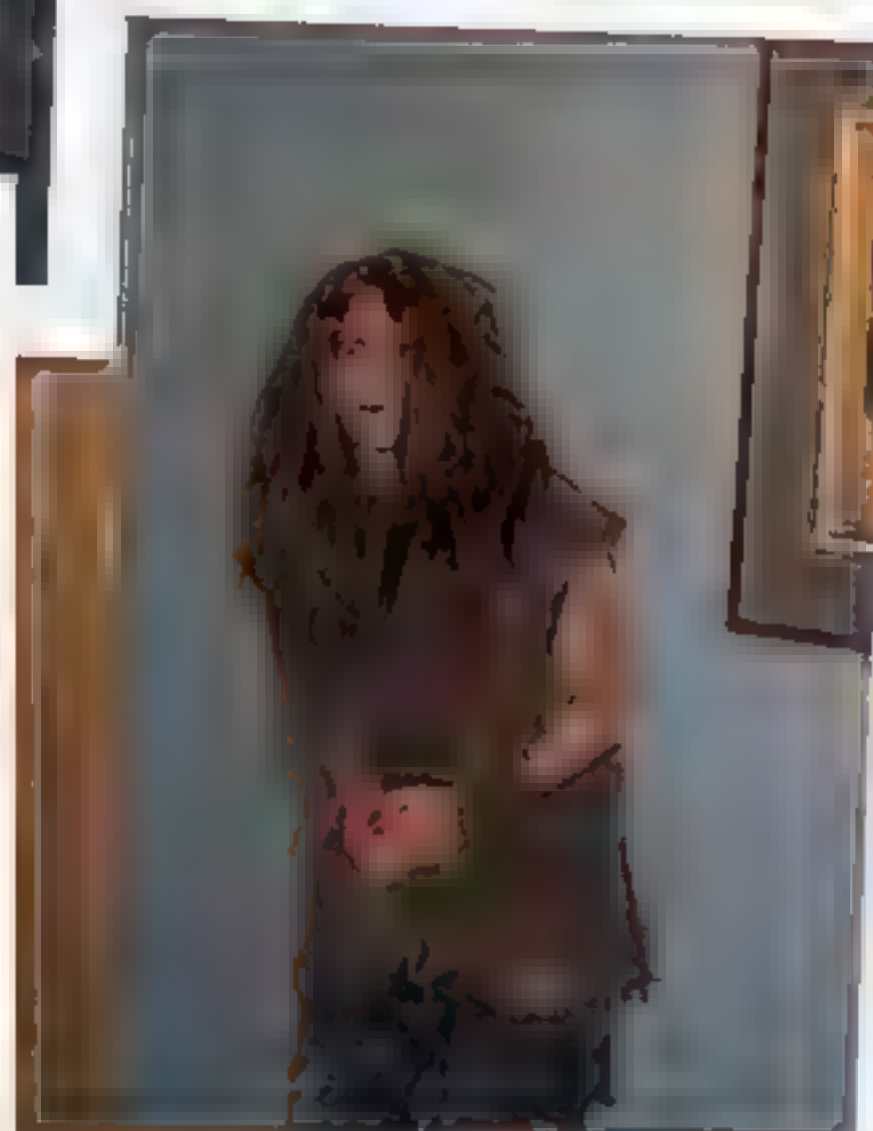
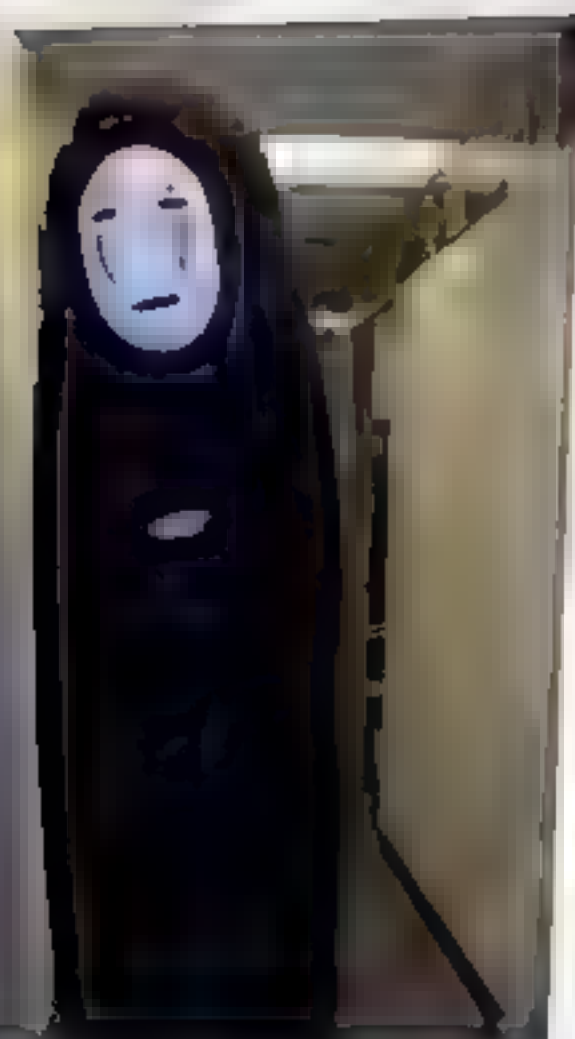
"When I saw it and I read it, I was totally overwhelmed," Heather says. She said yes—then was killed by an exploding enemy. Joel was beside her on the couch with a real ring.

Online sites and local, then national, then global newspapers picked up and spread the couple's unique engagement story. Remembers Joel, "The height of it was when Jimmy Fallon did a joke about it in his monologue."

They married and have been together ever since.







## THIS IS BLOWEEN

**HALLOWEEN AT MOST WORKPLACES** might mean that one person dresses up while everyone else just sort of pretends they didn't. At BioWare, Halloween at work is the opposite. There are costume contests, excessive decorations, and desk-to-desk trick-or-treating for developers' kids. Elaborate cosplay is the norm, as comic book characters, movie monsters, and super-obscure references become colleagues for the day.





## ART HISTORY OF THEDAS

THE WORLD OF THEDAS has a rich history of art as old and varied as its peoples. Concept artists on *Dragon Age* not only work on a visual style for the game but also the art within it. Their work draws heavily from real-world inspirations: Renaissance-era portraiture, the Art Nouveau movement, religious styles and media like stained glass, and favorite pieces from the golden age of illustration in the early twentieth century. The varied styles represent different races and nations of Thedas: their cultural evolutions, their worldviews. Even

Thedas's dominant religion, Andrastianism, is depicted in wildly different methods depending on who within the world is making the art.

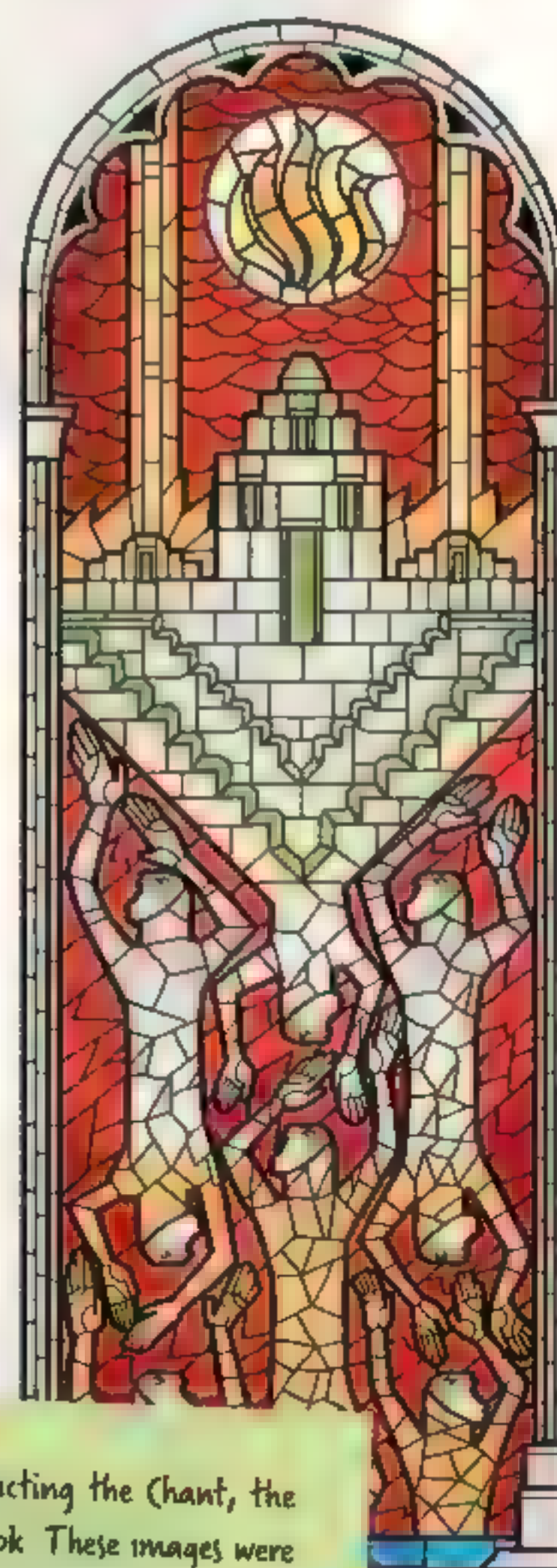
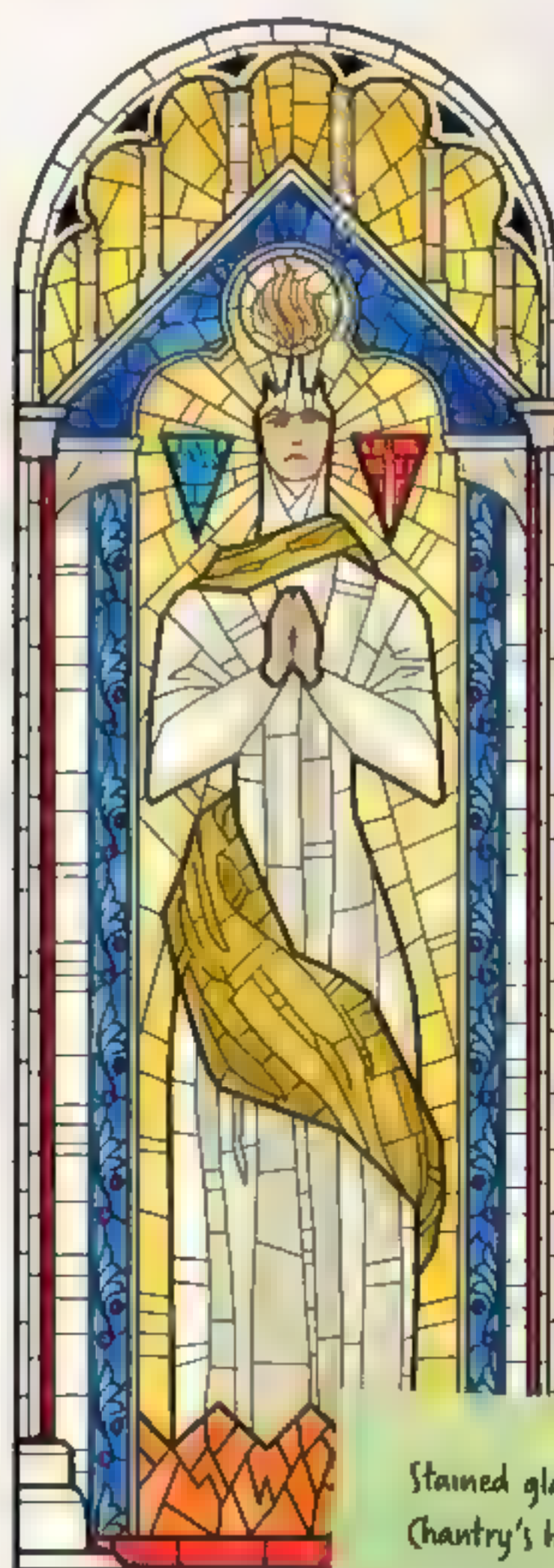
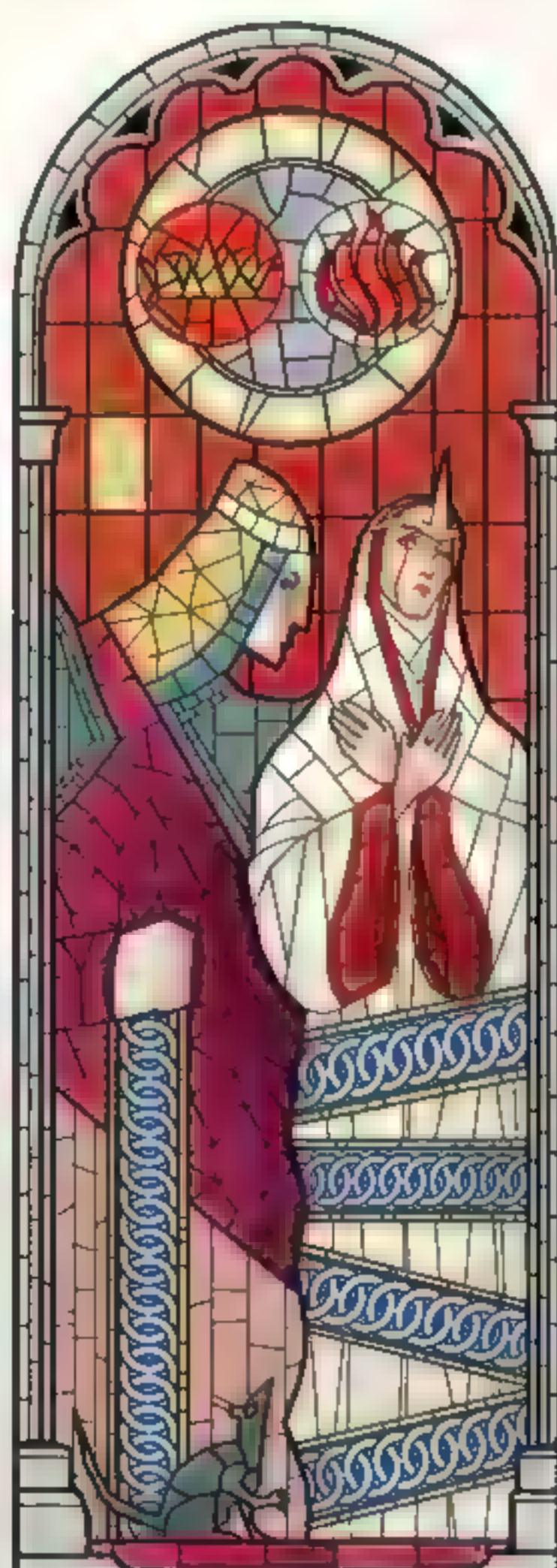
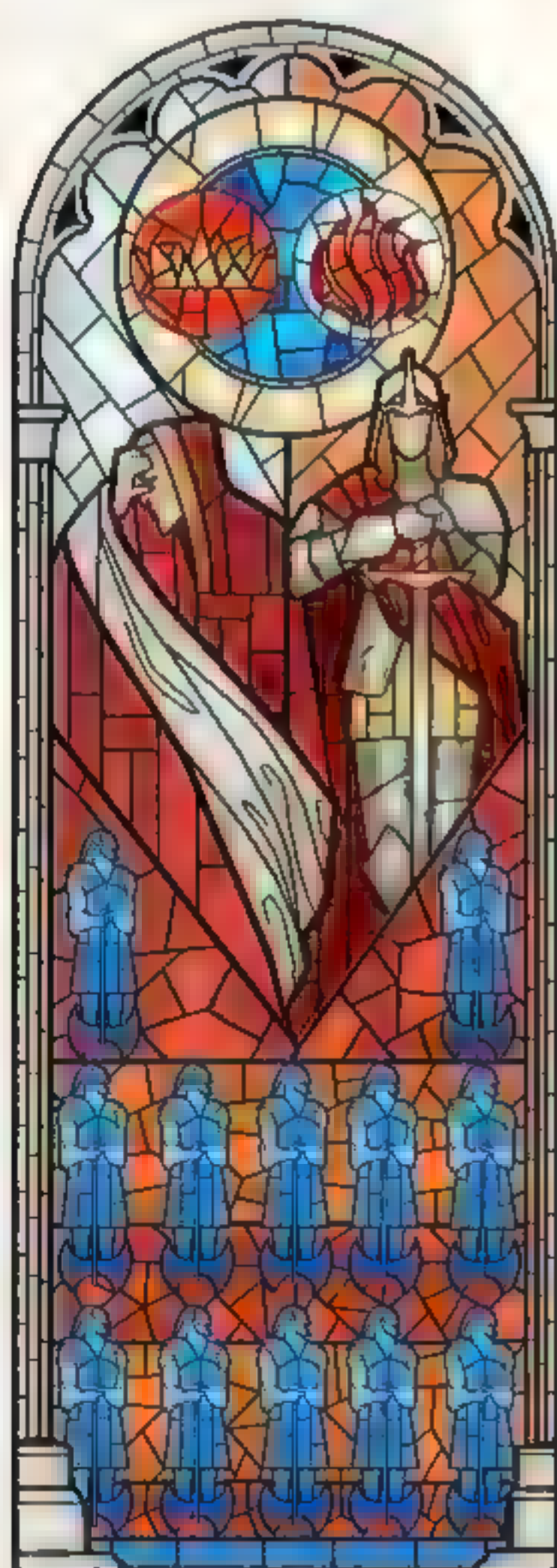
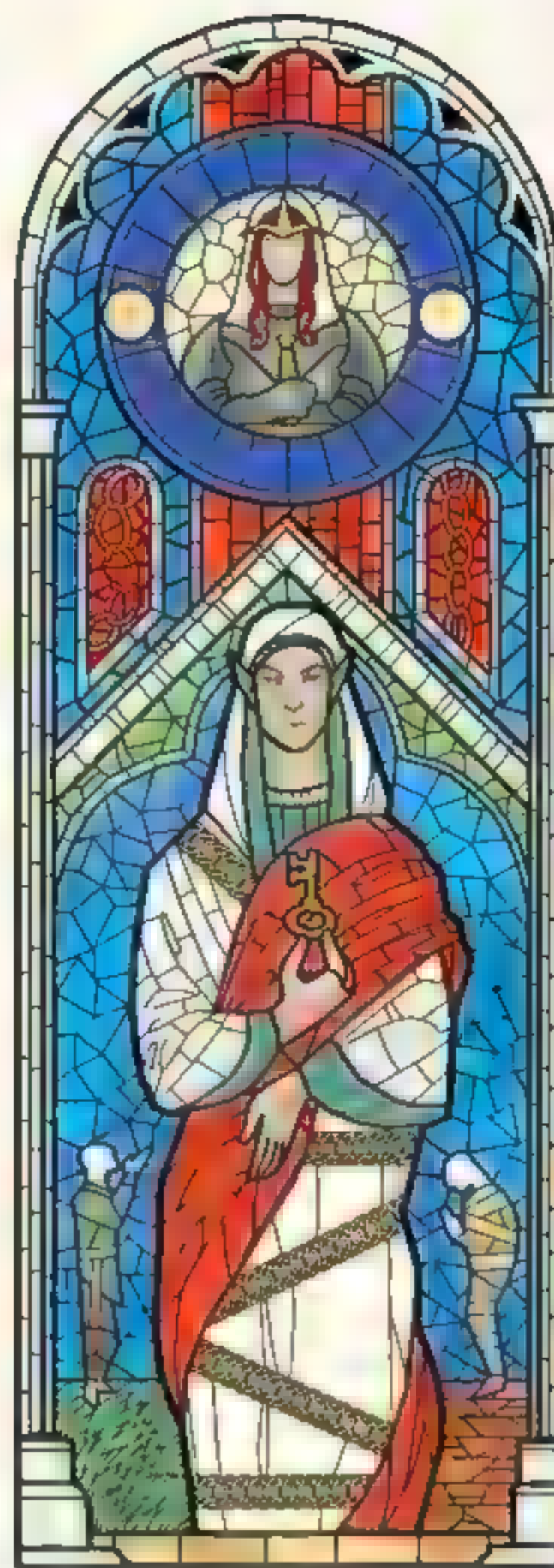
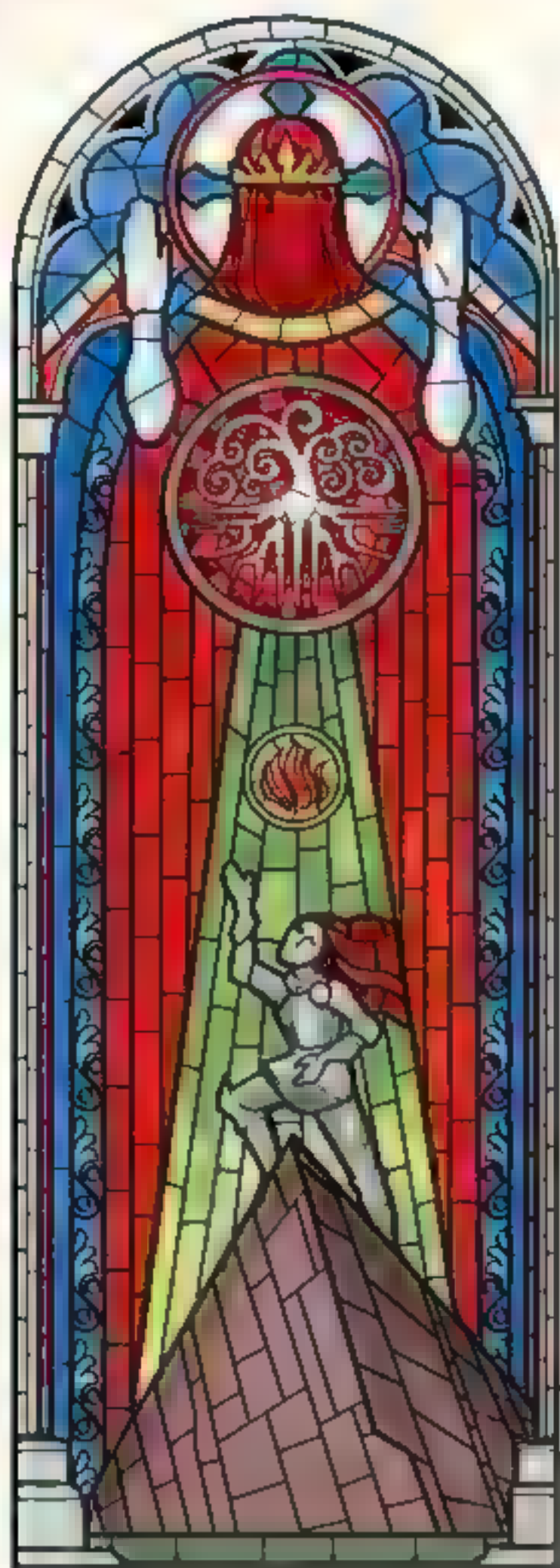
"It has an actual, believable, living art history," *Dragon Age* art director Matt Rhodes says. "There's the one religion through three different lenses. You see the Chantry take on it, the Orlesian take on it, and the Fereldan take on it. And the different interpretations of it, the different mediums used, the different stories that are told."









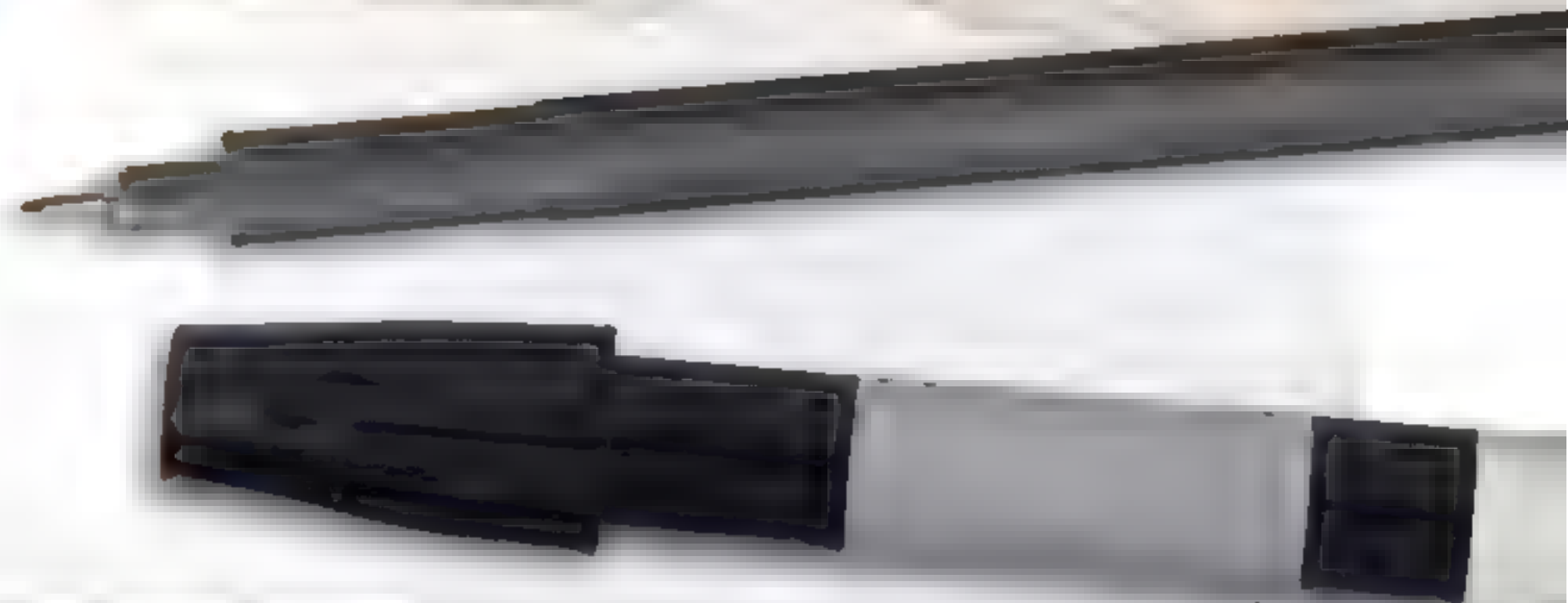


Stained glass depicting the Chant, the Chantry's holy book. These images were drawn by *Dragon Age* concept artist Nick Thornborrow for *Inquisition* to decorate religious spaces in that game and beyond. These images were printed out as semi-transparent decals to decorate glass in the fifth-floor kitchen of BioWare's Terrace office Tower location.





Dragon Age concept artists draw parallels between the real world and Thedas, using materials available to the cultures in game coupled with influences like Viking art for Ferelden and Greek and Italian art for Orlais. They also take care to place each piece in a particular point in Thedosian history.







## THE MAKING OF

# DRAGON AGE II

**KIRK WALL  
WASN'T BUILT  
IN A DAY, BUT IT  
WAS CLOSE**



### KEY FACTS DRAGON AGE II

**RELEASE DATE:**

March 8, 2011

**GENRE:**

RPG

**PLATFORMS:**

Xbox 360, PlayStation 3,  
Windows, Mac OS

**Developed in Edmonton  
Published by Electronic Arts**

*DRAGON AGE: ORIGINS* had the longest development period in BioWare's history. *Dragon Age II*'s was the shortest. Total development of *Dragon Age II* lasted roughly a year and a half.

Initially, *Dragon Age II* was going to be an expansion to *Origins*. Then it became a stand-alone expansion that players wouldn't need *Origins* to play.

"A few months into production, EA said, 'Yeah, expansions like this don't sell very well, so let's make it a sequel,'" lead writer David Gaider says. "So suddenly it became *Dragon Age II*, and we had to make it even bigger, although we also still had only a year and a half."

Production of *Dragon Age II* officially lasted just nine months, while the team was still supporting live content for *Origins*.

"We were done developing in January after the design team crunched all through the Christmas holiday," *Dragon Age II*'s art director Matt Goldman says. "Then it went to cert nine times. That is a crazy feat."

### HOW TO BUILD A FORTY-HOUR GAME IN NINE MONTHS

The story of Hawke's rise to power in Kirkwall had to feel epic. But with such limited time constraints, it would be hard to take the player very far, at least physically. Gameplay would largely be set in and around the city-state. And Kirkwall itself could only be so big.

The decision was made to instead expand the time period in which the story took place by telling a sweeping, character-driven story over a period of seven years, as Hawke settled in Kirkwall, fought off a Qunari invasion of the city, and attempted to stop all-out war between mages and templars.

"It was funny because we had no time to review. Like, even the main plot," David says. He remembers creative director Mike Laidlaw pitching him the idea of three stories, taking place at different points in the player's life, tied together by Varric's recollection of events. "So I rolled with that. And I remember I did one presentation on it." That presentation was approved, and it was off to the races.

"As we were writing, I realized there was going to be no oversight—that everything was going to be a first draft. Because nobody had time," David says. "I sat down with the writers and I said: 'Look, here's the conditions we're working under. A lot of what we're putting out is gonna be raw. We're not going to get the editing we need. We're not going to get the kind of iteration we need. So I'm going to trust you all to do your best work.'"

The writers focused on characters, knowing their importance to players. In the end, *Dragon Age II* received mixed reviews, with critics calling out repetitive spaces and combat, a product of the compacted development period. David, looking back, also has mixed feelings about the project.

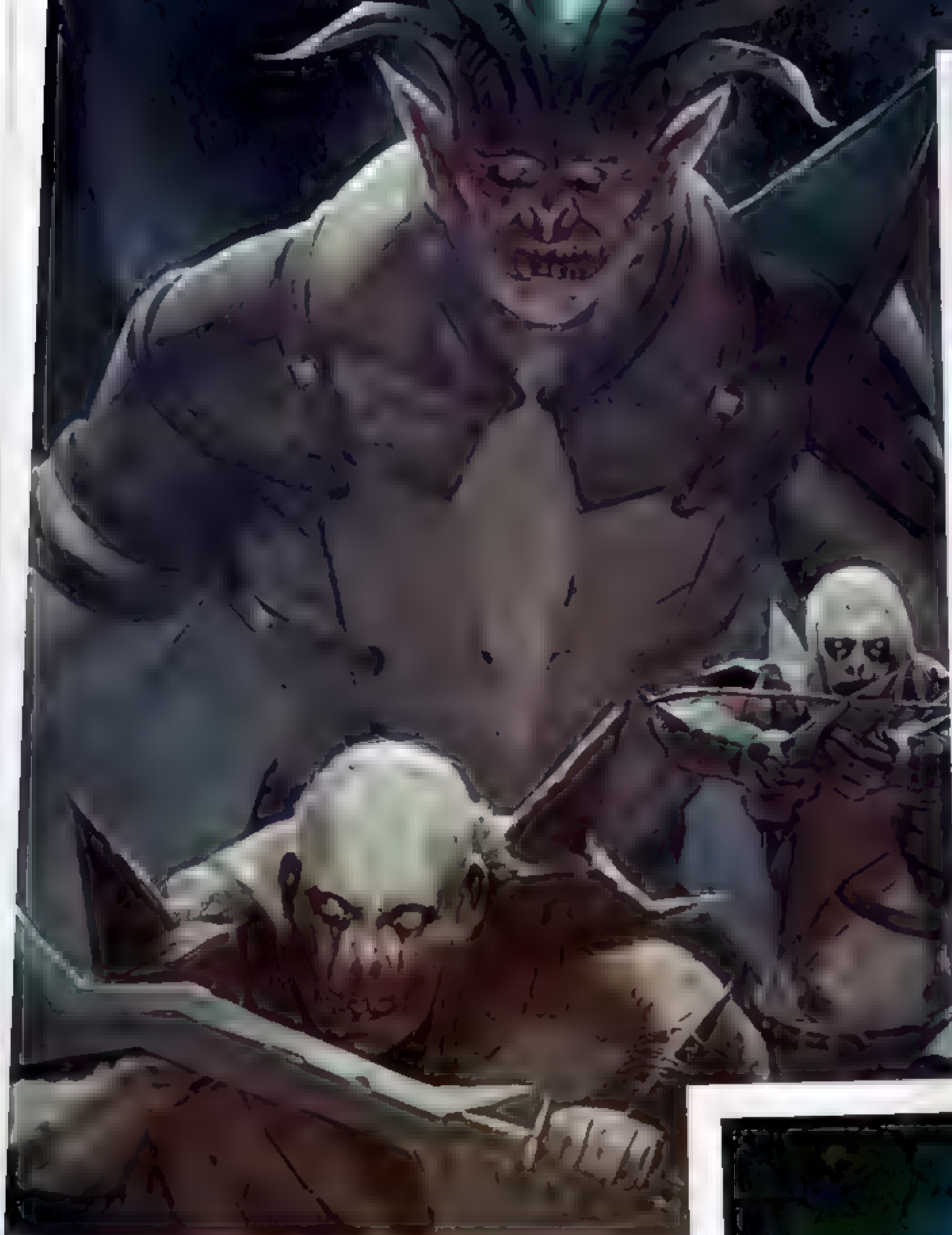
"A lot of corners were cut. The public perception was that it was a smaller game than *DA:O*. That's a sin on its own," David says.

"Despite all that, I thought *Dragon Age II* has some of the best writing of the series. The characters in *DA II* are actually my favorite."

David says the pace with which the writers had to work may have in some ways helped the writing.

"When we do a lot of revision, we often file away some of the good writing as well, some of the edginess," he says. "Somehow, *DA II*'s whirlwind process resulted in some really good writing."





#### ACCIDENTALLY CREATING BIANCA

The quick pace of *Dragon Age II*'s production meant characters landed on the writers in various stages of concept. Isabela, for instance, was already fairly well defined, as she had also appeared in *Dragon Age: Origins*, albeit not as a party member.

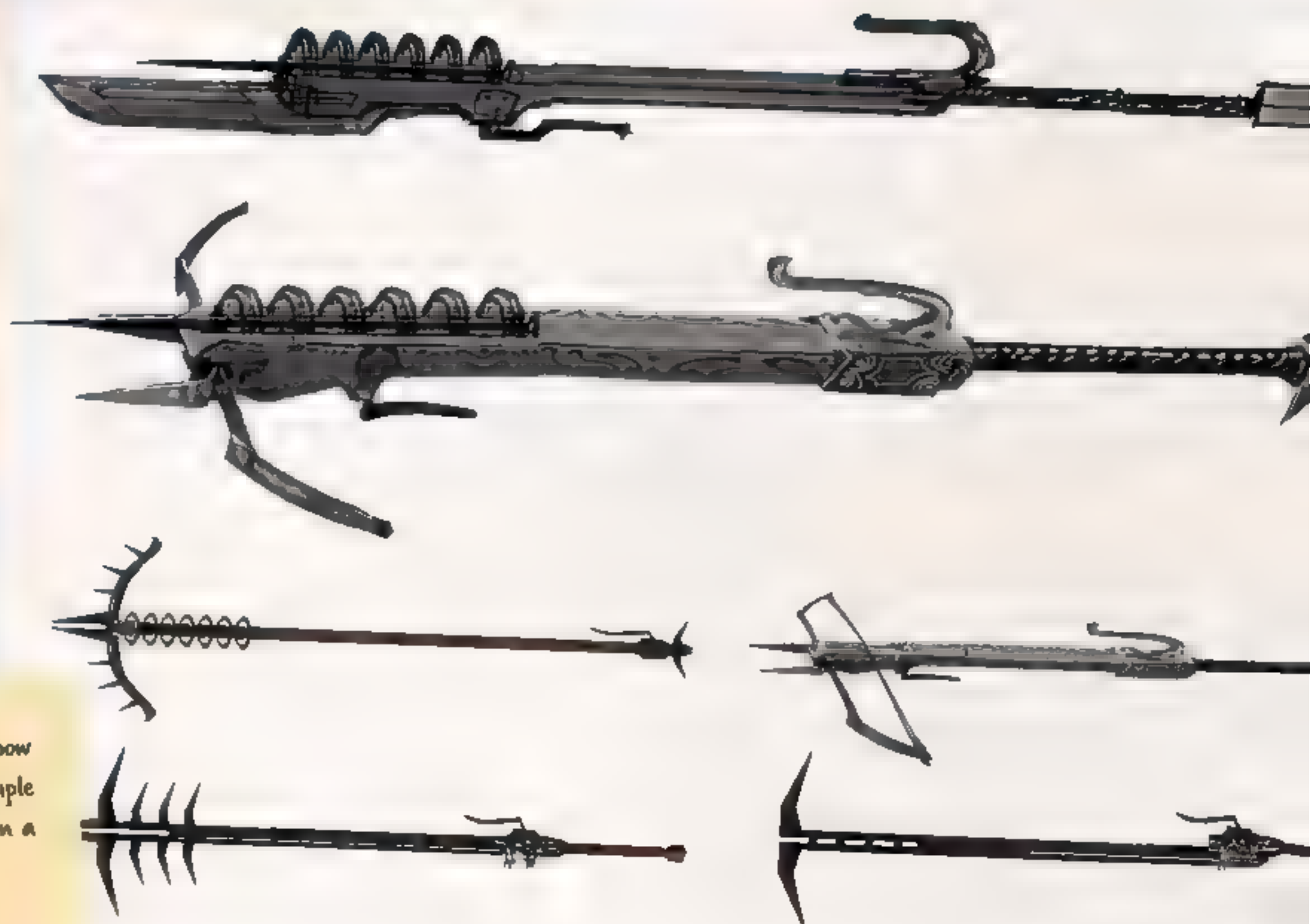
"Varric was literally one piece of concept art," his writer, Mary Kirby, says. "And it's the one that everybody's seen. He's got his arms out and he's in the duster. And he's got no weapons."

A dwarven writer, Varric had been conceived as more a storyteller than a fighter, which was pretty true to his character. But Varric was a party member. He would have to fight.

"His skill is talking. So what does he do in combat as a party member, the guy whose skill is bullshitting?" Mary says.

The direction was to make Varric as different from Oghren as possible. The redheaded dwarven follower from *Origins* was a rough-and-tumble warrior. Dwarven mages are exceedingly rare. So Varric needed to be a rogue, like Isabela. But he couldn't dual wield like Isabela. He needed to be an archer.

"But you really can't picture this dude with a bow," Mary says. "For a dwarf, it would probably be a crossbow. We didn't have crossbows, or we had crossbows for the darkspawn. And they were part of the model. We didn't have a separate crossbow that was equippable by characters. They had to, like, crop one off of a darkspawn and remodel it. And that became Bianca."



Varric carries a wooden repeating crossbow named Bianca. Artists explored multiple versions of crossbows that might fit in a fantasy setting



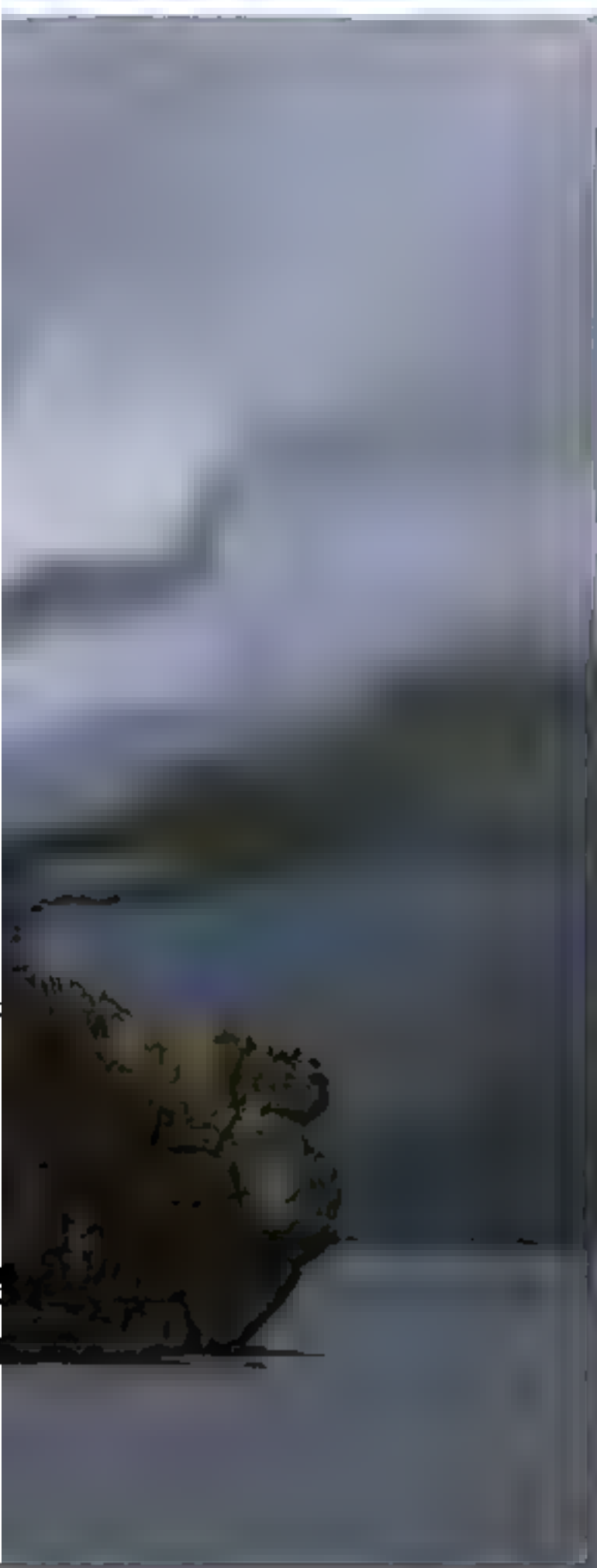
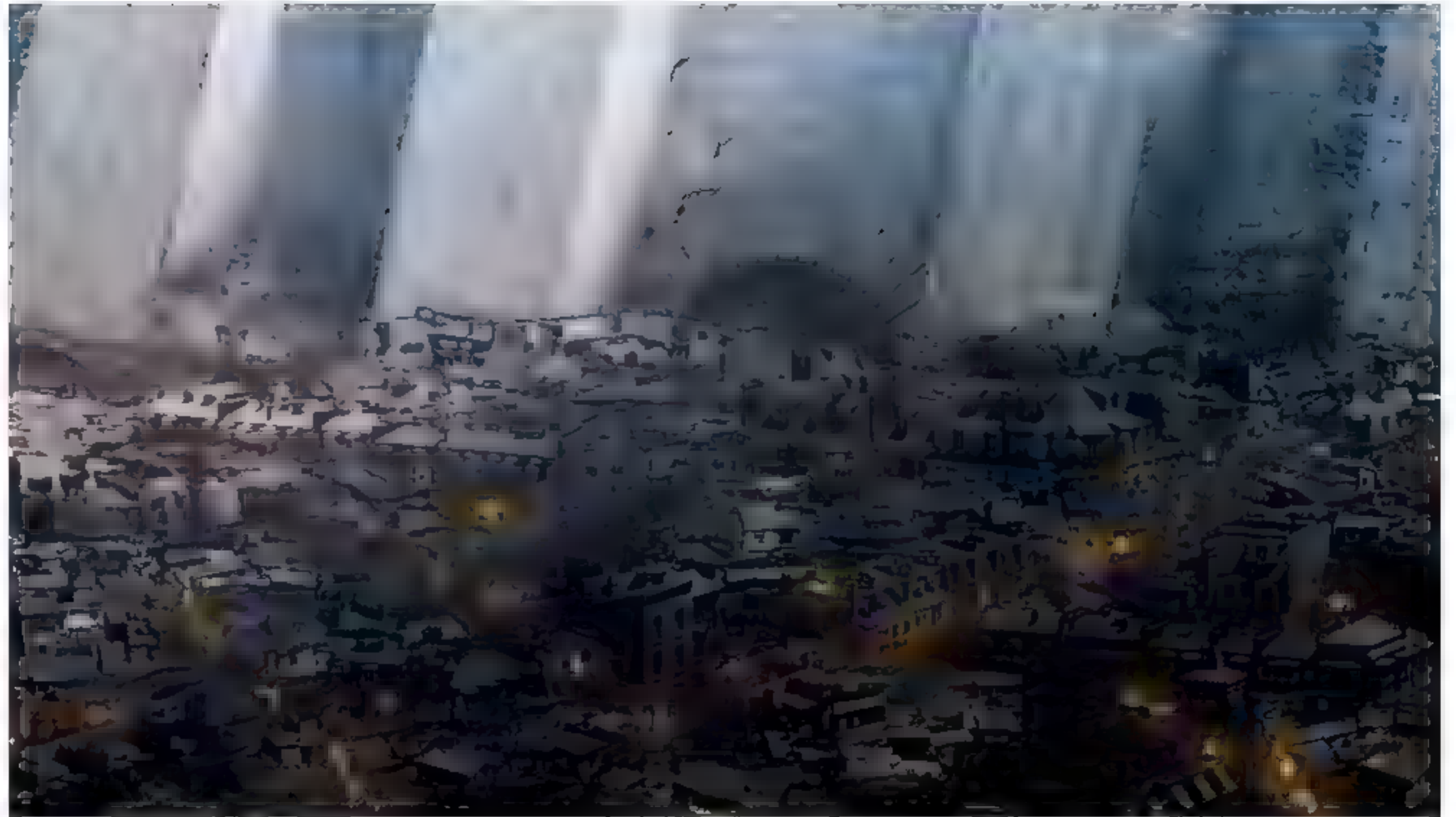


"I was a little bit of a fan of the  
 artist's style. The concept was  
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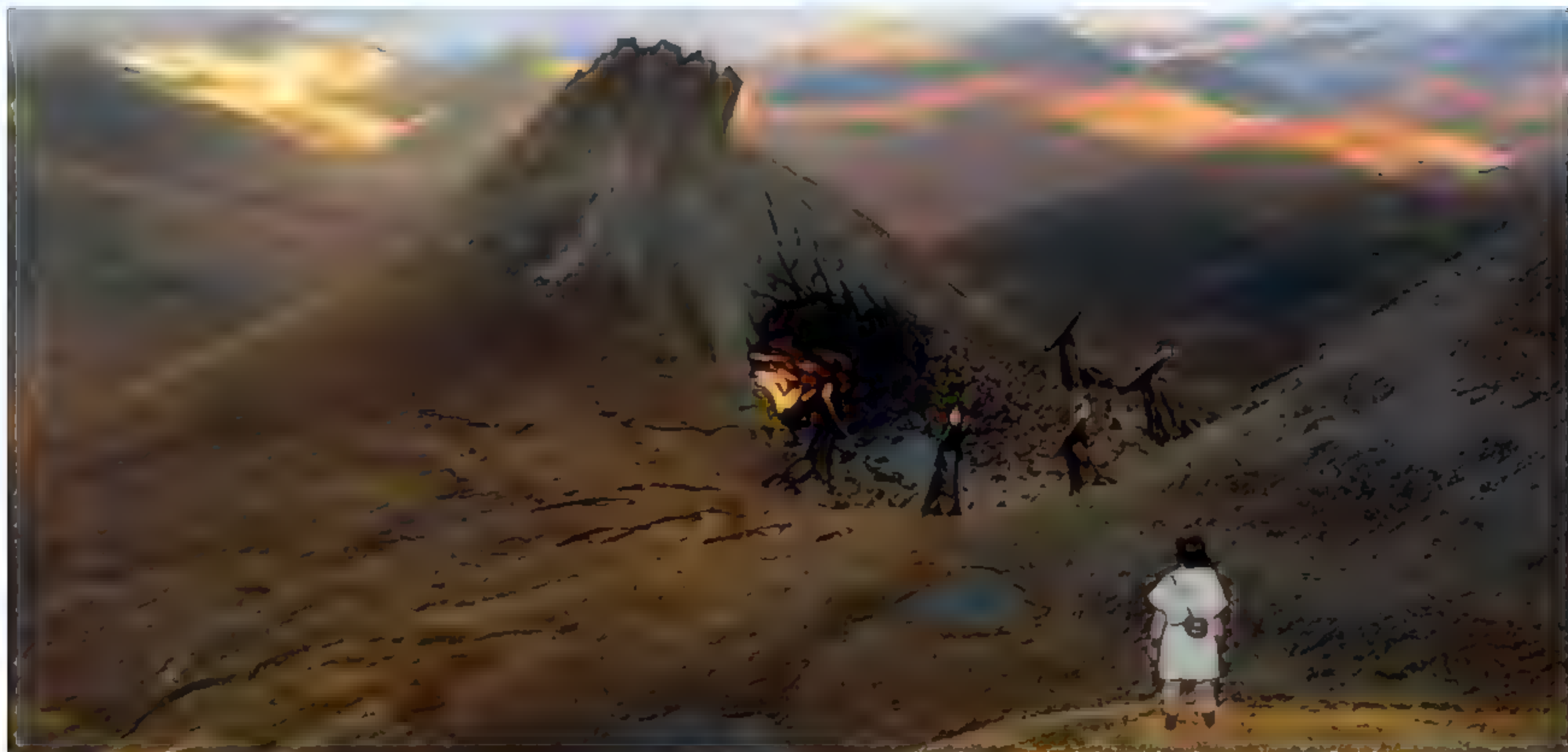
"If I was a classic fantasy  
 person, DA I was a little bit of a  
 fan of the artist's style. The concept  
 was new to me, the story of the world  
 was interesting, and the art was  
 great."











## CINEMATIC SMOKE AND MIRRORS

WHEN FILMING A SCENE in a movie, what is seen in the frame is all that matters. Just off camera, there might be microphones, backdrop materials, maybe even some guy (quietly) eating lunch.

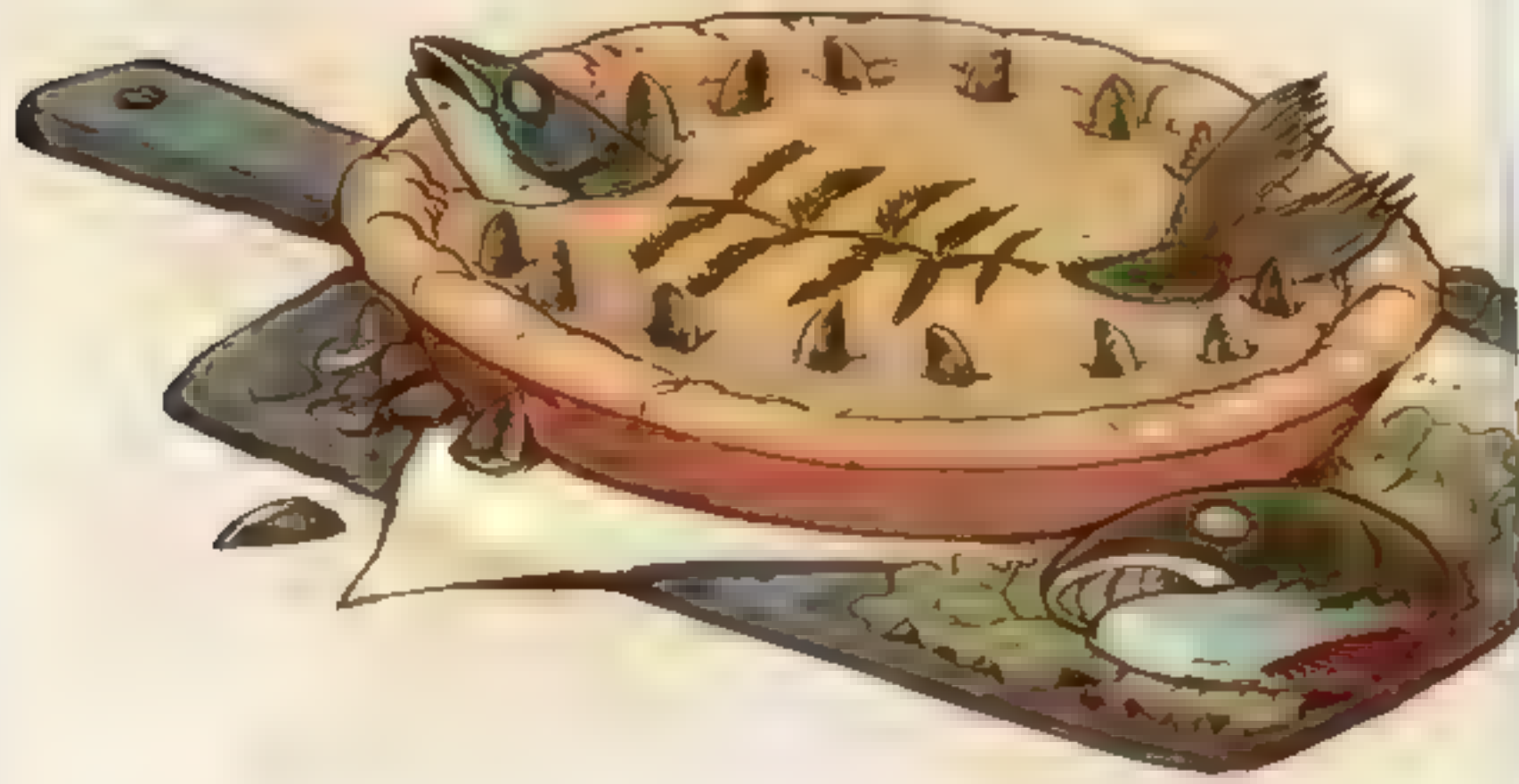
Video games aren't so different. Cinematic designers framing scenes will often shuffle characters, props, even aspects of the environment around in order to make what's seen in the frame look good.

"In any one of our games, there is a ninety-five percent chance that if you turn the camera away from what it's looking at, you'll see all kinds of janky stuff," *Inquisition* cinematic designer John Epler says.

"The moment we know the camera is no longer facing someone, we no longer care what happens to them. We will teleport people around. We will jump people around. We will literally have someone walk off screen and then we will shift them one thousand meters down, because we're fixing some bug."







## Starkhaven Fish and Egg Pie

Starkhaven's famous pie is made with lightly poached fish from the Minanter River, which runs through this most beautiful of Marcher cities. I've heard that King Ottomar Vael ate a fish pie for his supper every day until his untimely death at the hands of brigands.

### INGREDIENTS

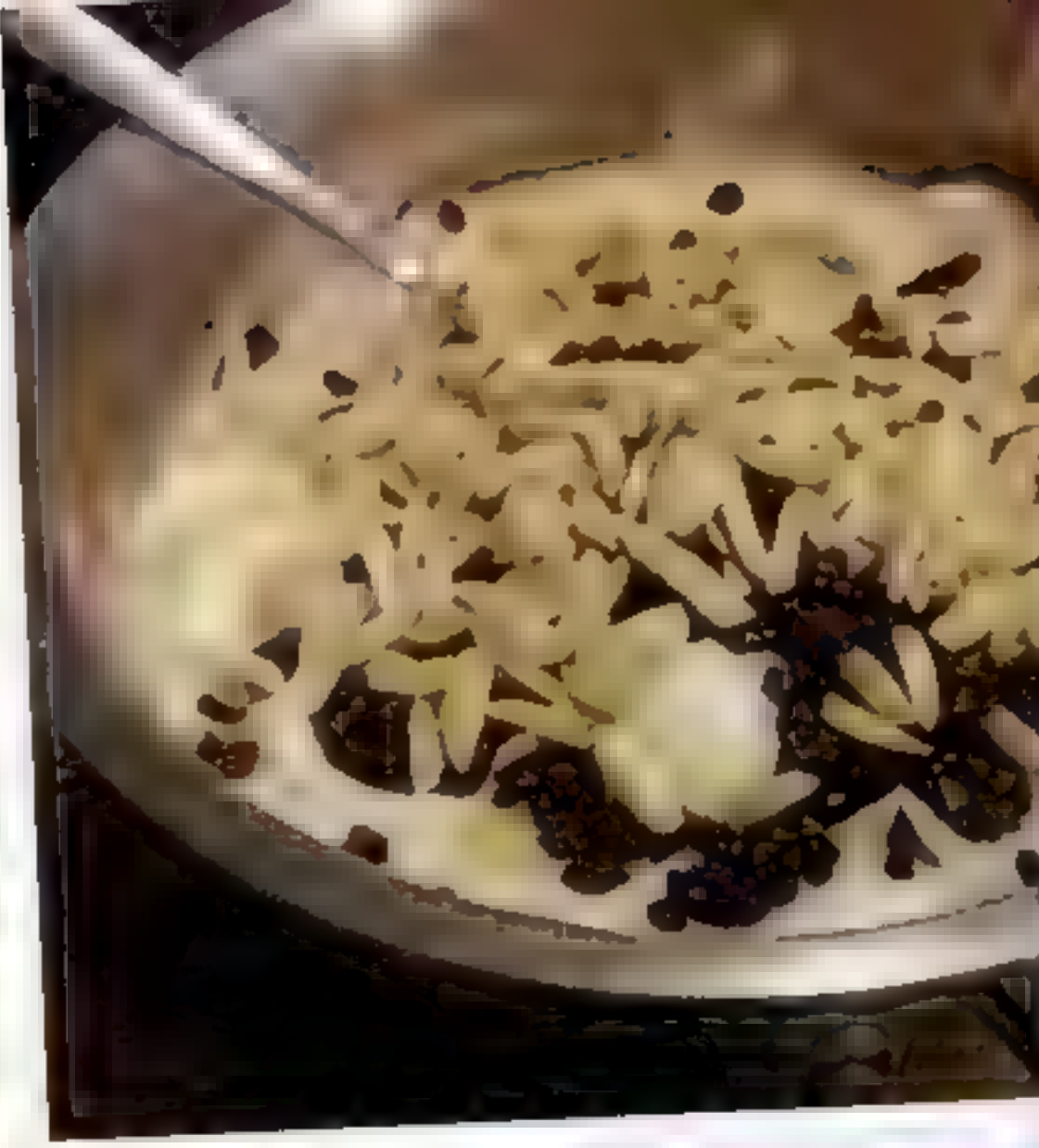
- Good pie dough, made with butter
- One to three fish, depending on size, from the Minanter River (carp, trout, or others)
- One cup of dried currants
- One cup of sliced almonds
- Two or three eggs, boiled hard and sliced
- Half a cup of butter
- Half a cup of flour
- Two cups of fish broth (or reserved poaching liquid)
- Two cups of milk
- Salt, pepper, and freshly grated nutmeg
- One cup of single cream
- One egg, beaten, for preparing the crust
- Whitebait or other small fish, fried till crispy (optional)

### DIRECTIONS

In a good-sized pot, place one gallon of water. Add to this one cup of good wine, a cup each of chopped onion, carrot, and celery, several sprigs of thyme, a leaf or two of bay, and a handful of sea salt. Heat the liquid until it steams, then gently add the fish to the pot. Ensure that the pot is fully covered. Continue to let it simmer, but do not let it boil. When the fish is just cooked through, remove it from the liquid and let it cool. Remove the meat from the bones and break it into chunks.

In a separate pot, melt the butter. Add the flour and stir for about two minutes. Add the broth and milk and whisk vigorously till the mixture is smooth. Continue to whisk while you bring the sauce to a boil and allow it to cook for at least ten minutes. If you find the sauce too thick, thin it out with more fish broth or milk. Once it is cooked, take it off the heat and stir in the cream. Season liberally with salt and add freshly grated nutmeg and pepper if desired. Now stir in the meat from the fish, the currants, the almonds, and the sliced eggs. Transfer this mixture into a large earthen crock.

Roll out the pie dough into a circle large enough to cover the crock. Brush the beaten egg around the edges of the crock, then place the pie dough over top, covering the fish filling. Crimp the edges and cut away any excess dough. Brush the dough with egg and make slits in the crust. Bake until the crust is golden and the filling is bubbling. If desired, serve the pie topped with small fish, deep fried whole for added texture and flavor.



## A RECIPE FOR WELL-DONE LORE

ONE OF THE clearest windows into a culture is through its food. When creating fictional worlds, defining culinary traditions is an important but often overlooked world-building exercise.

For *Dragon Age's* world of Thedas, writers Sheryl Chee and Mary Kirby started with a disgusting little dish called fluffy mackerel pudding.

In the middle of the busy times on *Origins*, either Sheryl or Mary (they don't remember who) found a recipe online for fluffy mackerel pudding, scanned in from a seventies cookbook.

"I don't understand why it was fluffy. Why would you want mackerel pudding?" Mary says. "We loved it so much we included it in *Origins* in the codex."

That led them to create more food for Thedas, full recipes included, like a Fereldan turnip and barley stew by Mary, as well as Sheryl's Starkhaven fish and egg pie. The latter was a favorite of *Dragon Age II's* Sebastian Vael.

"To me it made sense for it to be fish pie because a lot of the Free Marches are on the coast," Sheryl says. "It was something that was popular in medieval times, so I thought: 'Let's make a fish pie!' I looked at medieval recipes and I concocted a fish pie which I fed to my partner and he was like: 'This is not terrible!'"

For the *World of Thedas* lore books, the whole studio was asked to contribute family recipes that might have a place somewhere in Thedas. Sheryl adapted these recipes to fit within one culture or another, including a beloved banana bread that localization producer Melanie Fleming would regularly bake to keep the *Dragon Age* team motivated.

"Mel's banana bread got us through *Inquisition*," Sheryl says.

## Culinary Treasures of Thedas

### Jellied Pigs' Feet

Jellied meats are a delicacy in some parts of the Free Marches. Originally a peasant food, born out of a reluctance to waste any part of a killed animal, jellied meats have gradually caught on with the wealthy, first in Ansbury, where the dish was invented. While this dish is customarily made with pigs' feet, pork hocks have occasionally been substituted, since some find the idea of eating pigs' feet repulsive. I myself was wary at first when presented with the traditional dish, but several glasses of wine filled me with the courage to take a bite of the glistening, translucent mass. After all, without adventure and novelty, surely this life would lack savor! If I can do it, so can you, dear readers. So grip your spoons tightly, take a breath, and dig in! After all, what have we to fear from a gelatinous cube?



### INGREDIENTS

- Ten pigs' feet, pork hocks, or a combination of the two
- Four tablespoons of salt
- Two large onions, chopped
- Two whole heads of garlic, chopped or crushed, plus more to taste
- One tablespoon of allspice, whole or ground
- Two tablespoons of peppercorns
- Six bay leaves

### DIRECTIONS

Score the pig parts with a sharp knife and wash thoroughly. Immerse them in cold water with two tablespoons of salt. Leave overnight in a cool, dark place.

The next morning, wash the feet thoroughly, then place in a big pot with cold water and the remaining two tablespoons of salt. Bring to a boil. Scum will rise to the surface of the water. Skim as much of it off as you can. Add the chopped onion and garlic to the boiling water. Wrap the allspice, peppercorns, and bay leaves in a small piece of cloth. Tie tightly and add to the pot. Simmer for six to eight hours, until the meat is tender and falling off the bones.

Strain the stock from the meat and set it aside. Separate the meat from the bones and remove the skin, if that is your preference.

Place the meat in a deep dish or pan and pour the stock over it. Crush some fresh garlic, as many as twelve cloves, and mix it in with the meat and stock. Cover the pan with cloth and leave it in a cool, dark place for about twelve hours—enough time for it to set. Serve cold.

### Pickled Eggs

You haven't truly been to Fereldan until you've had a mug of warm, watery ale and a pickled egg at a Fereldan tavern. Fereldans seem to love their pickled eggs, and they will prescribe them for just about every ailment there is, from fevers to ague to sneezing. One drunken codger in the Gnawed Noble in Denerim even swore to me that old pickling brine from that very tavern, mixed with dog hair and elfroot ash, helped him regrow a finger lost in the Fifth Blight. If the authentic experience of cooking down a chewy, salty-sour egg in a dimly lit tavern with dirt floors and besotted carousers sounds far too stimulating, I offer an alternative: a formula for pickled eggs, so you may consume them at your leisure in your parlor, away from the smell of wet dog and unwashed beards.

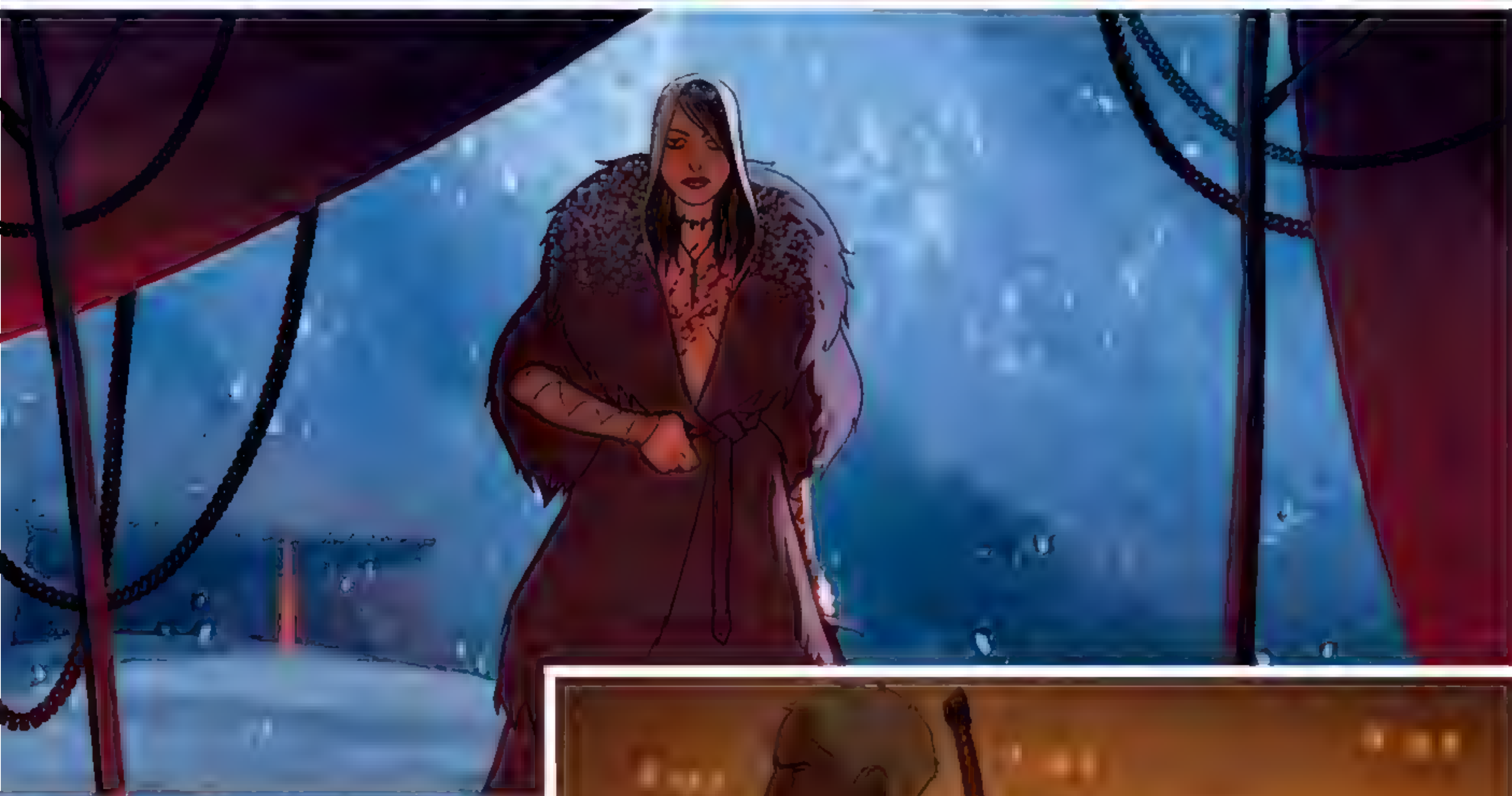
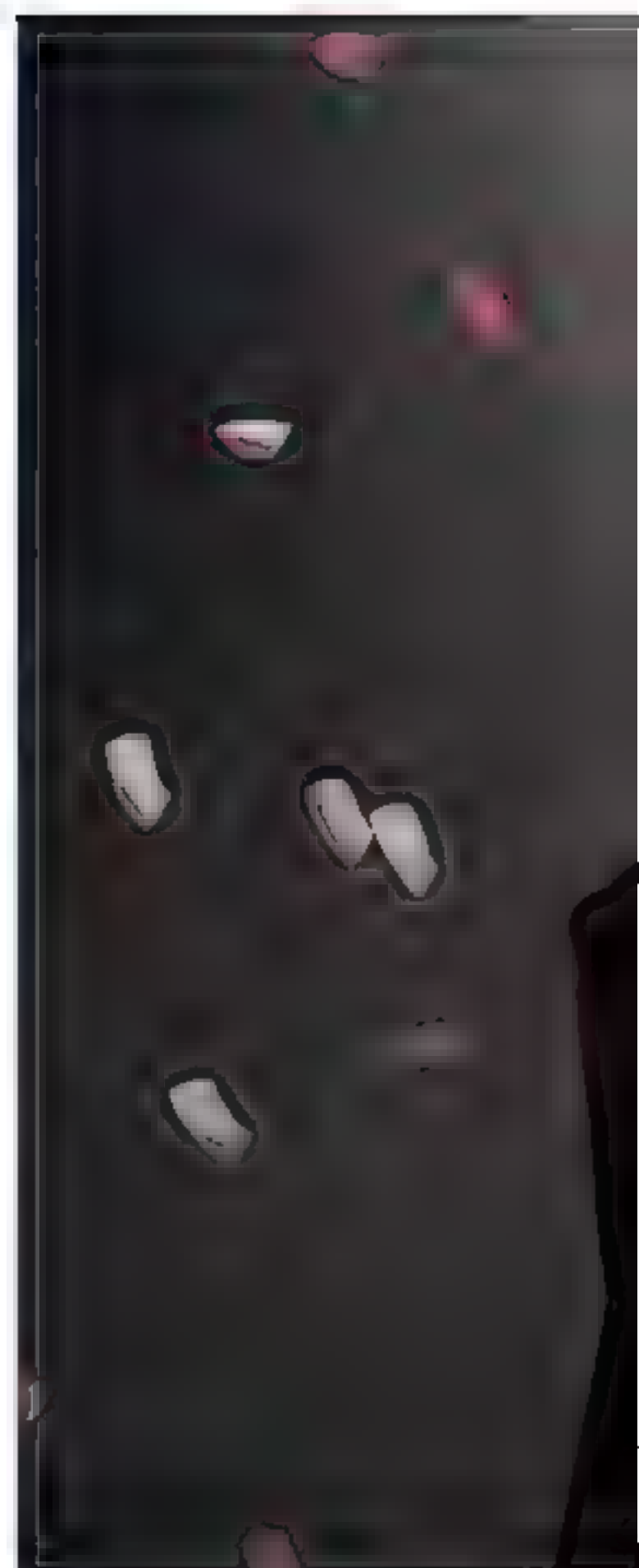
### INGREDIENTS

- Two tablespoons of sugar
- One teaspoon of salt
- Two cups of vinegar
- Three-quarters of a cup of water
- Twelve to sixteen eggs, boiled and peeled

### DIRECTIONS

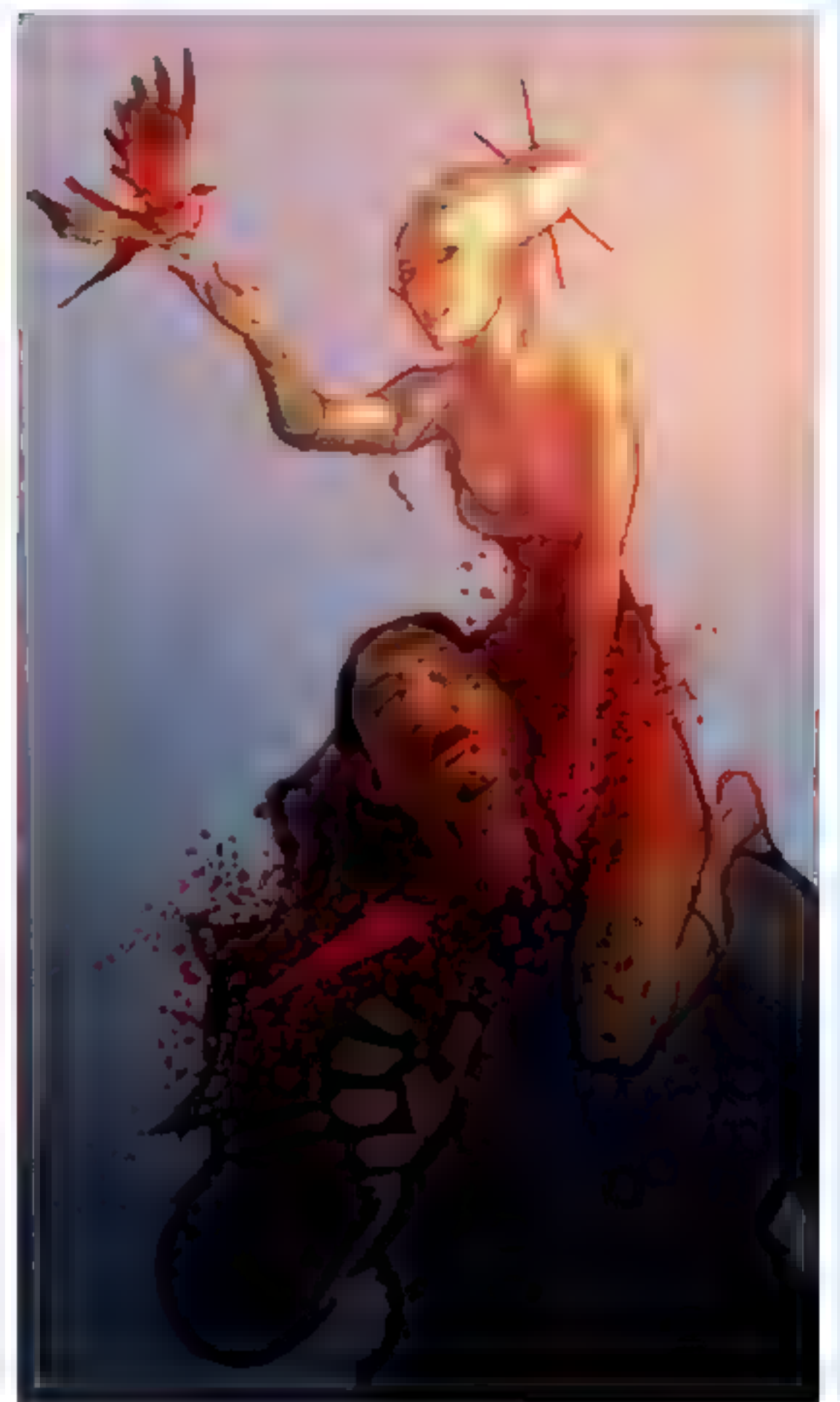
Stir the sugar, salt, vinegar, and water together in a pot. Simmer for several minutes. Place the eggs in a heavy earthen jar and pour the vinegar mix over top. Seal the jar, then let it stand in a cool, dark place for at least two days before eating.



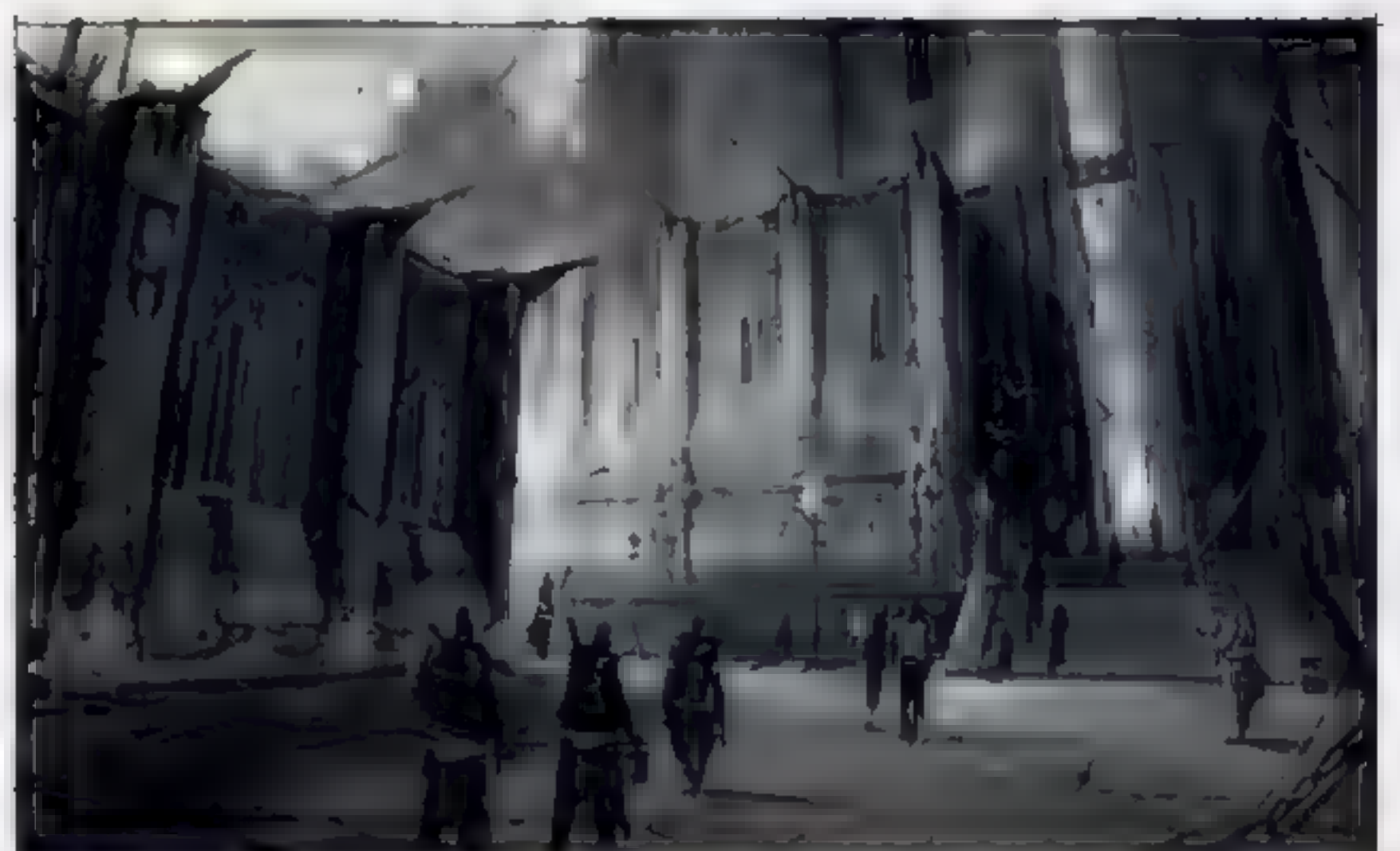
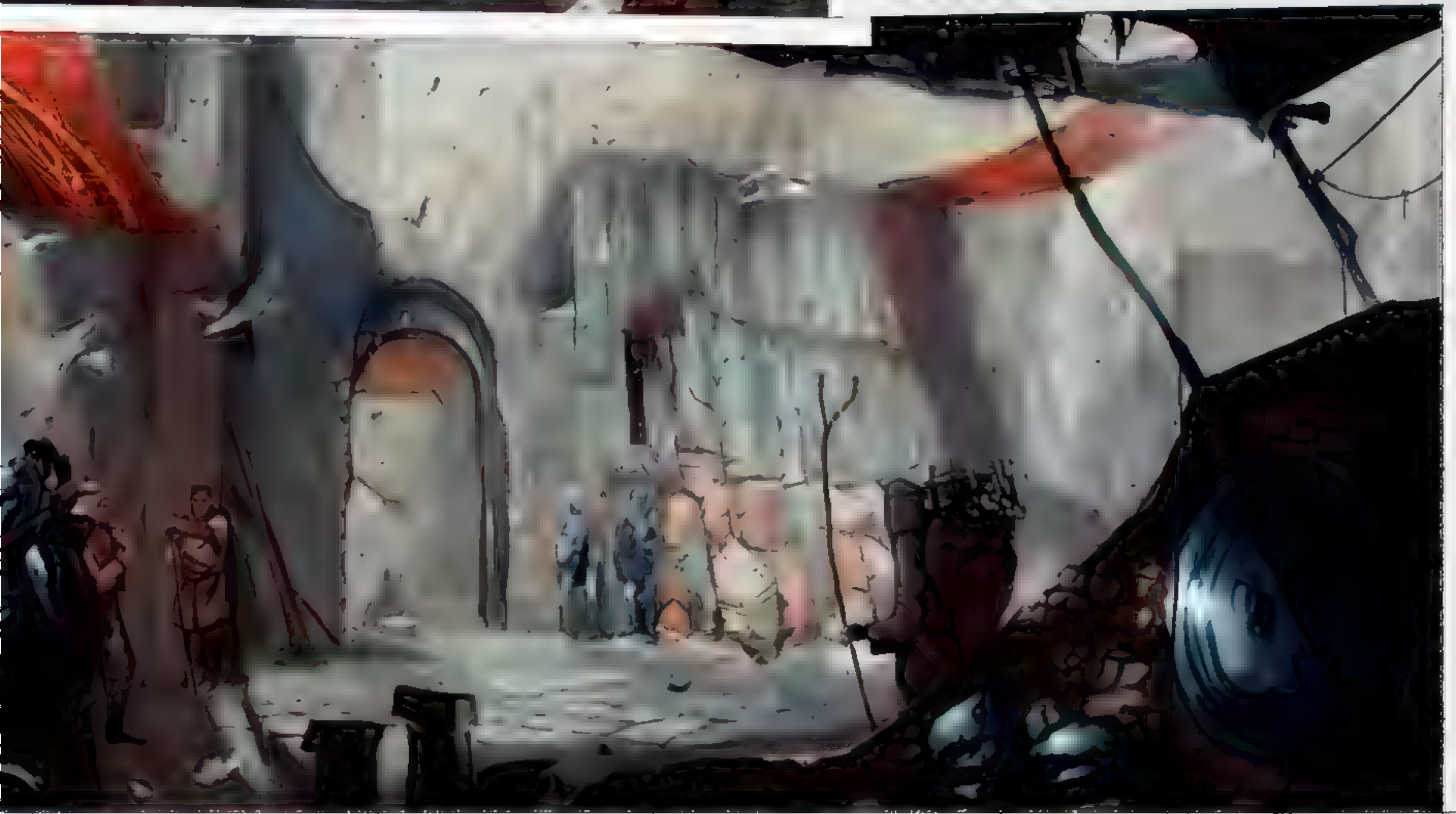
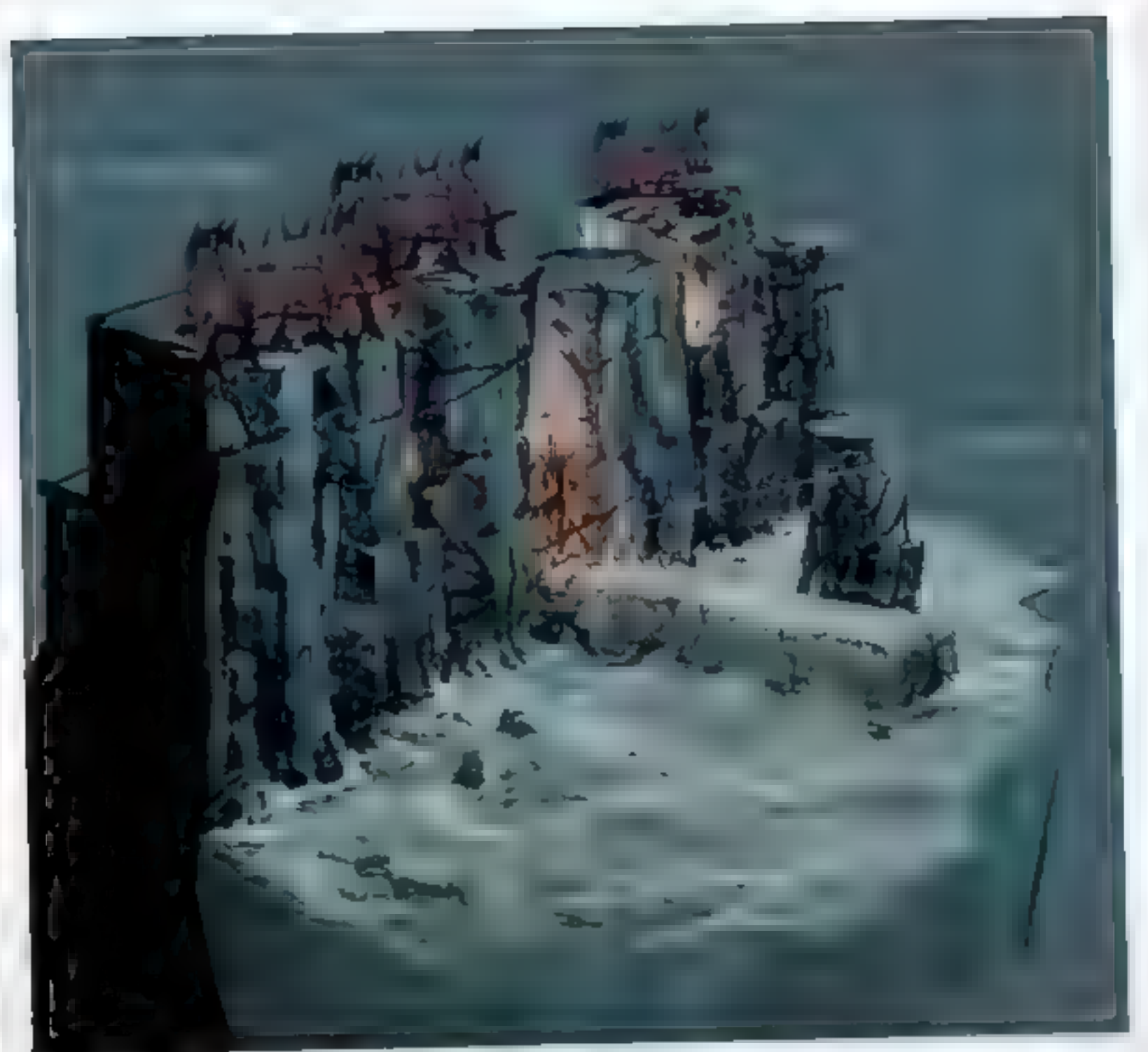


in the early stages of the project before the concept artists are aware of anything they like to establish with their work. Concept story elements could be introduced by those drawings and then incorporated into the game as the project progresses.

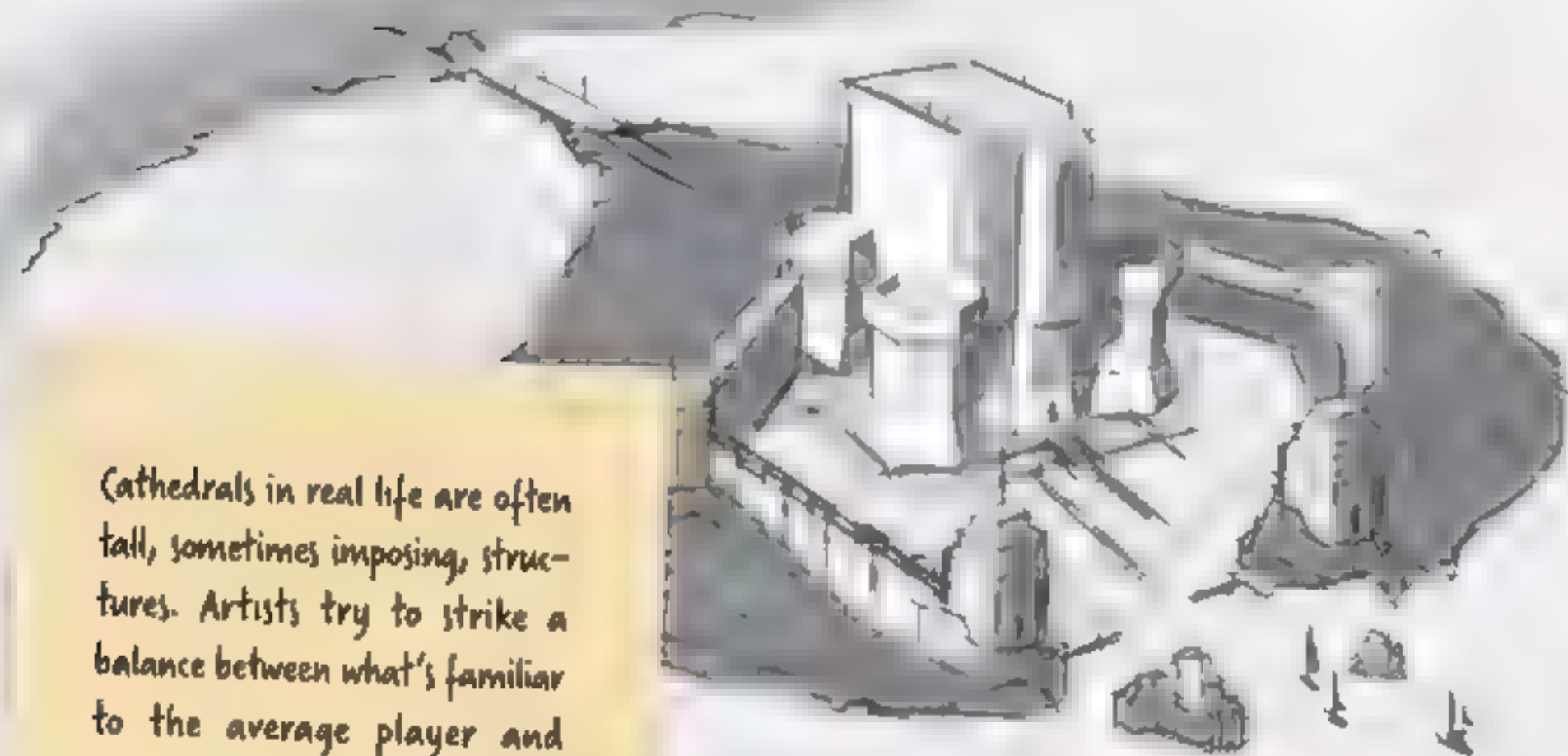
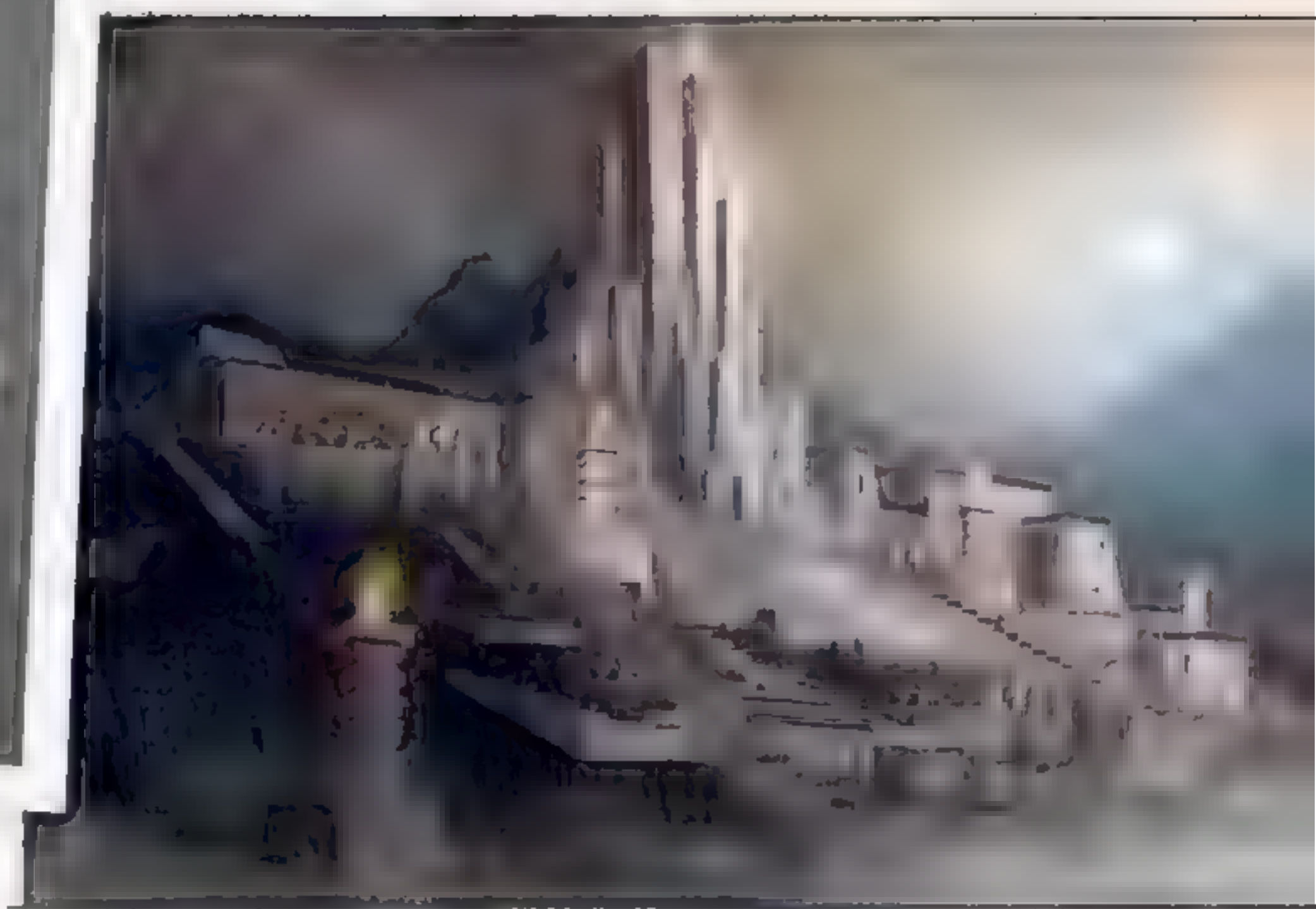




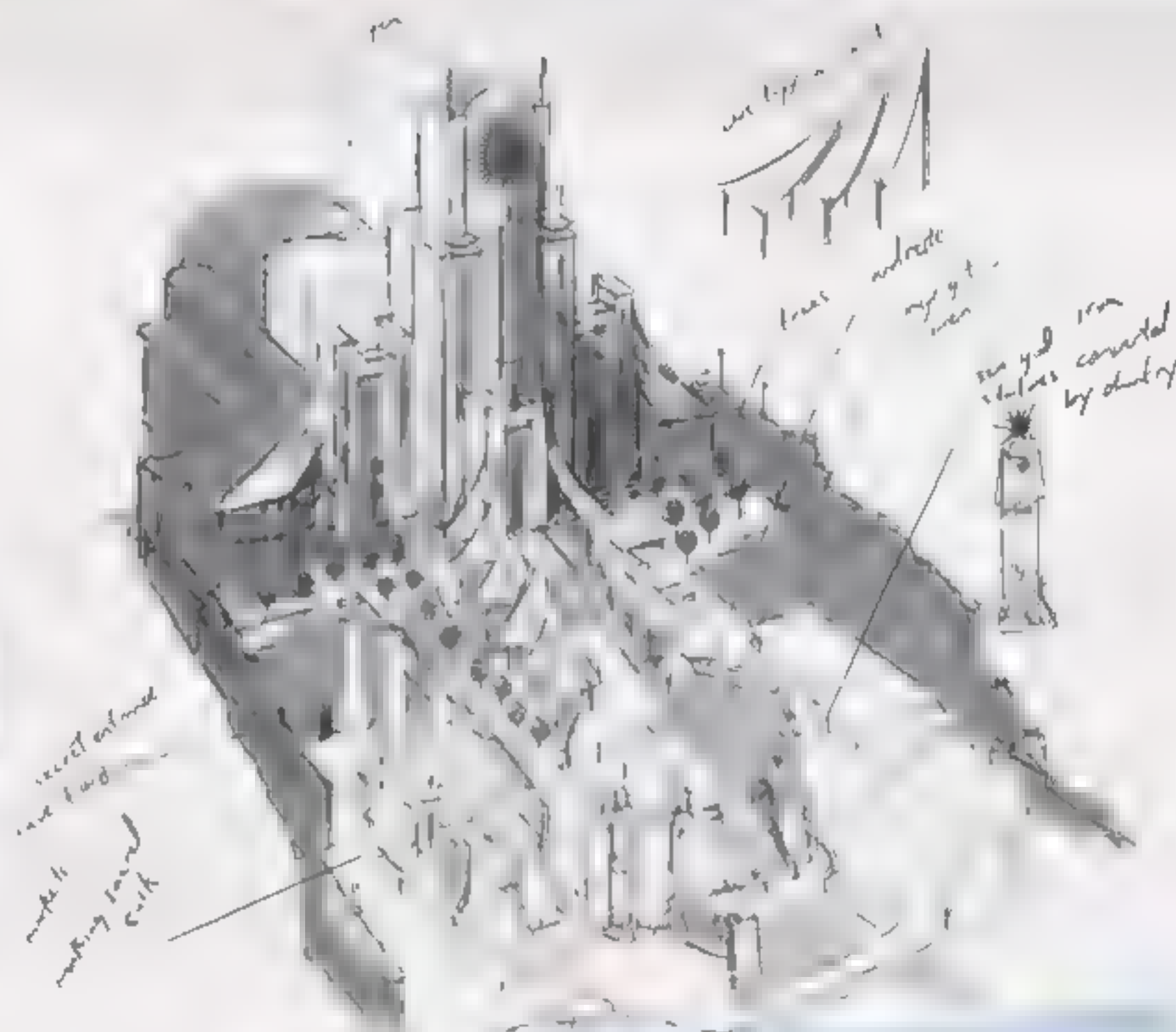








Cathedrals in real life are often tall, sometimes imposing, structures. Artists try to strike a balance between what's familiar to the average player and what's unique to the setting.



Designing anything in Kirkwall pushed the concept artists to the limits of visual storytelling, because Kirkwall had a long history that they wanted to be present. It was once the hub of Teninter's slave empire. So it needed to look brutal and harsh. But then it needed to feel reclaimed, evolved, with elements of contemporary Free Marches culture.

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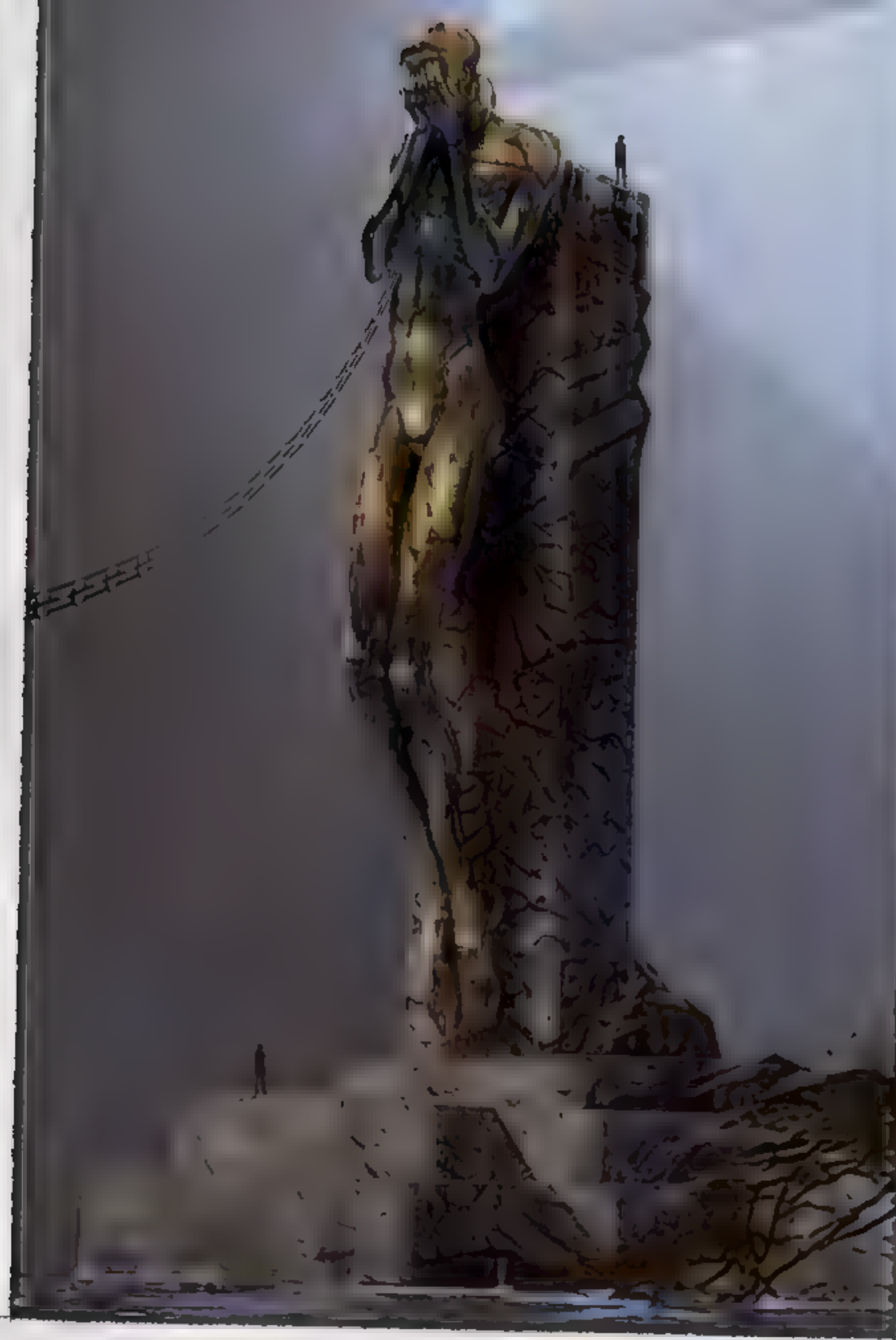




"A lot of people think that concept art is drawing dragons and space heroes and stuff like that, when really the bulk of the work is just the mundane details necessary to create a world. You can say more about a culture or a character in the chair that they build or choose, sometimes, than in any other way."

—Dragon Age II concept artist Matt Rhodes





### BIO-TRIVIA

**DRAGON AGE II WAS ORIGINALLY TITLED DRAGON AGE EXODUS**

THE FIRST WORKING TITLE FOR *Dragon Age II* was *Dragon Age Exodus*. The name was chosen by the developers as a reference to the Hawke family's journey from *Dragon Age: Origins* to *Dragon Age II*. However, the decision was made to change the title to *Dragon Age II* to more clearly connect the game to its predecessor. When it came time to name the game in the *Dragon Age* series, BioWare returned to the original naming conventions, with the game subtitled *Inquisition* instead of being called *Dragon Age*.

*Dragon Age II* was the first game in the series to be developed by BioWare's Vancouver studio, though that name was strictly internal.

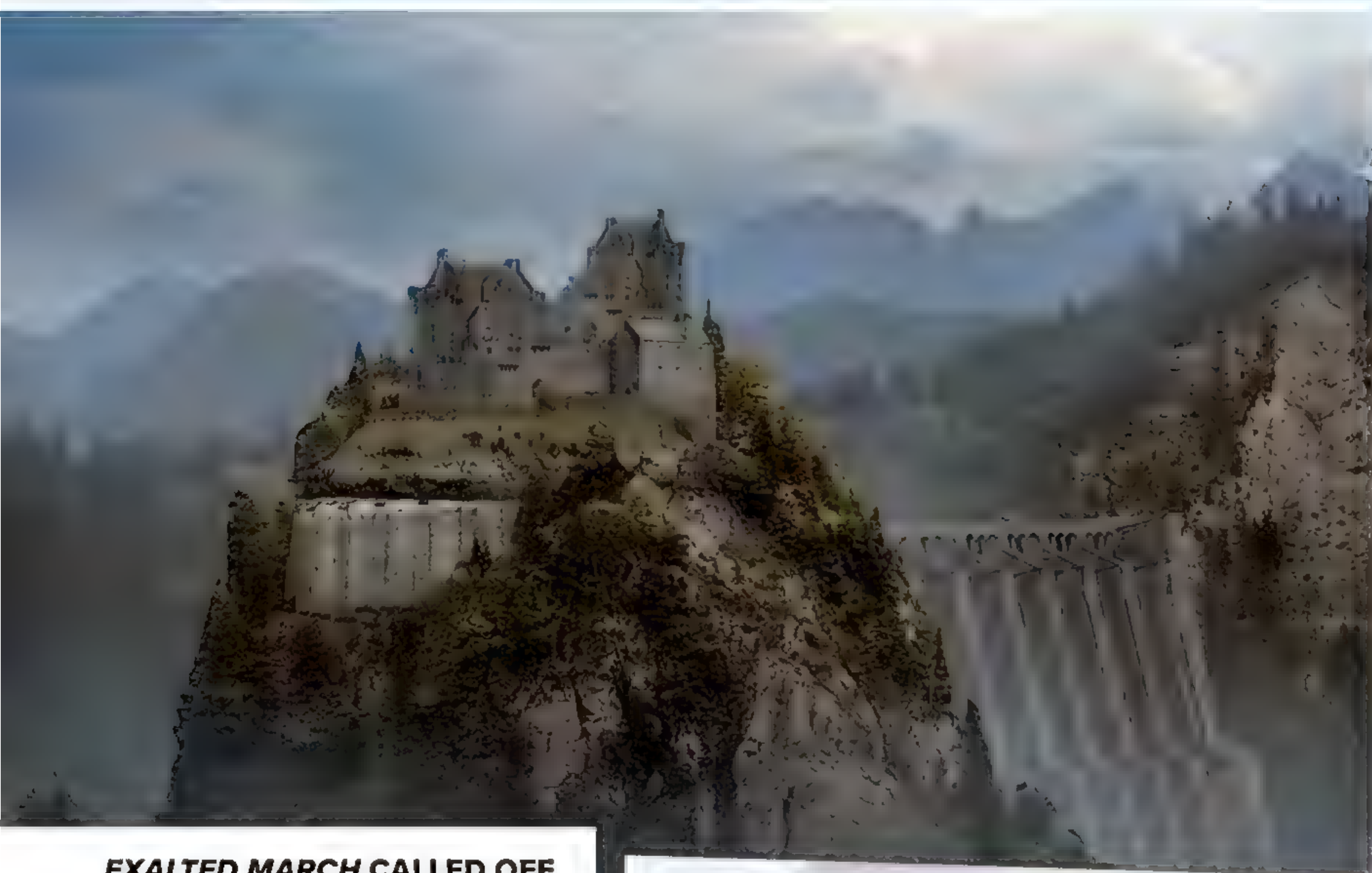












## EXALTED MARCH CALLED OFF

DRAGON AGE II'S CANCELED EXPANSION WAS A PRECURSOR TO INQUISITION

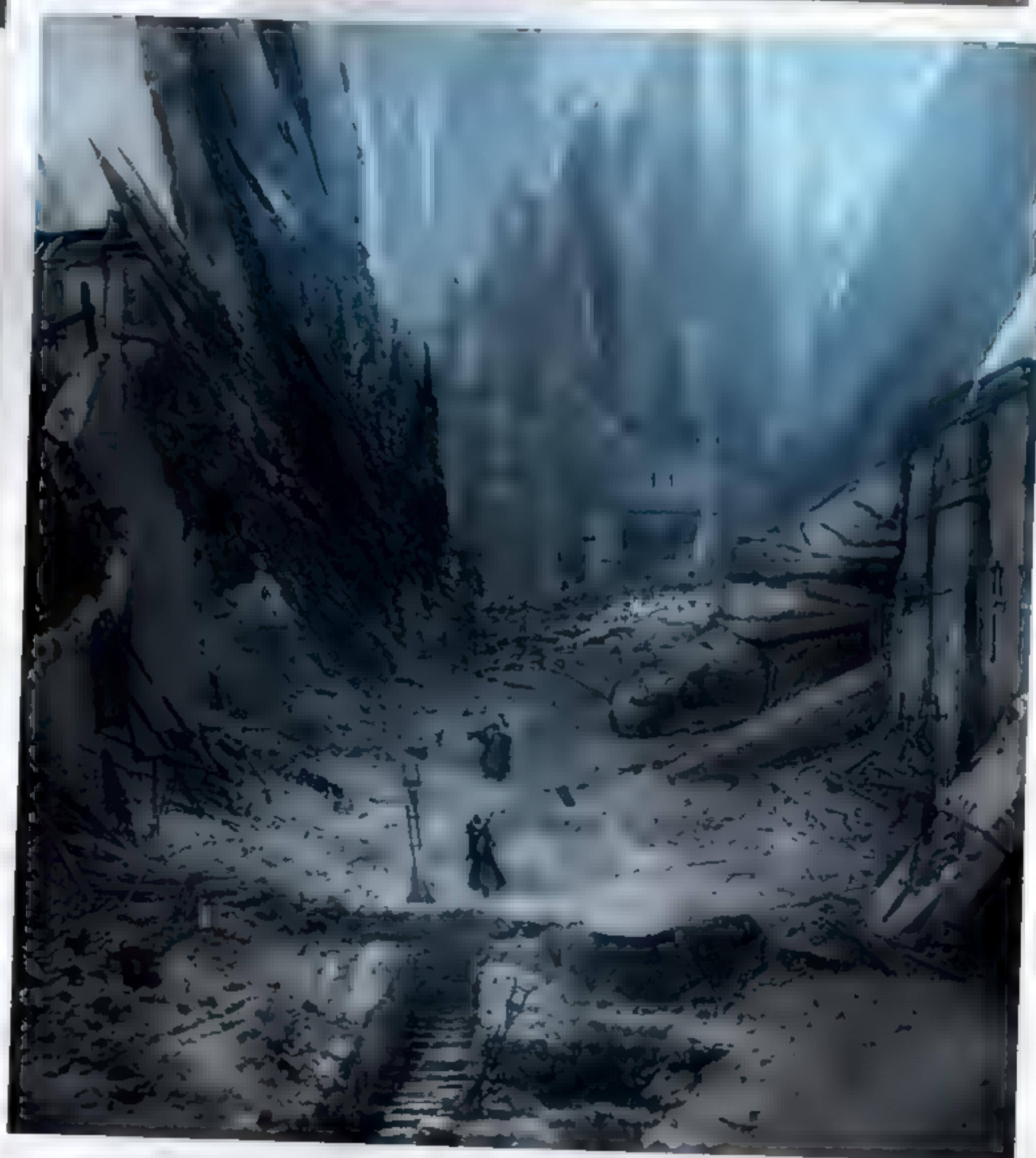
**THE EXALTED MARCH** was a canceled expansion to *Dragon Age II* meant to bridge the gap between the events of *DA II* and the planned sequel, *Dragon Age: Inquisition*. The expansion focused on the fallout from Kirkwall's explosive finale, with Corypheus serving as the villain.

"After the end of *Dragon Age II*, when Meredith turns into the big red lyrium statue, she basically infests Kirkwall and you end up with what actually ended up being the red templars taking over Kirkwall and being essentially Corypheus's army," *Dragon Age II* cinematic designer John Epler says.

To stop him, Hawke recruited various factions, having to choose between groups like Isabela's Felicissima Armada and the Qunari at Estwatch, forcing the hero to split loyalties and risk relationships in the process.

"It was supposed to bring *Dragon Age II*'s story to an end," lead writer David Gaider says. "And it was supposed to end with Varric's death. I was very happy with that, because all of *DA II* was his tale. The expansion was supposed to start at the moment Cassandra's interrogation of him ended in the present. And we finished off the story with Varric having this heroic death."

It tied things up and would have broken so many fan hearts, something the writers on *Dragon Age* notoriously enjoy. But between a transition to the new Frostbite engine and the scope of *Dragon Age: Inquisition*, the decision was made to cancel the expansion, work any hard-to-lose concepts into *Inquisition*, and in the process, save Varric's life.







Concept art for *The Exalted March* explored new areas previously not depicted in the *Dragon Age* universe, with costumes that reflected next steps for familiar characters. Varric was going to war. What would he wear? With Anders (if he survived *Dragon Age II*), the plan was to present a redeemed Warden.







A character that vaguely resembled Sera in *Dragon Age: Inquisition* was first conceived for *Dragon Age II*'s expansion content.



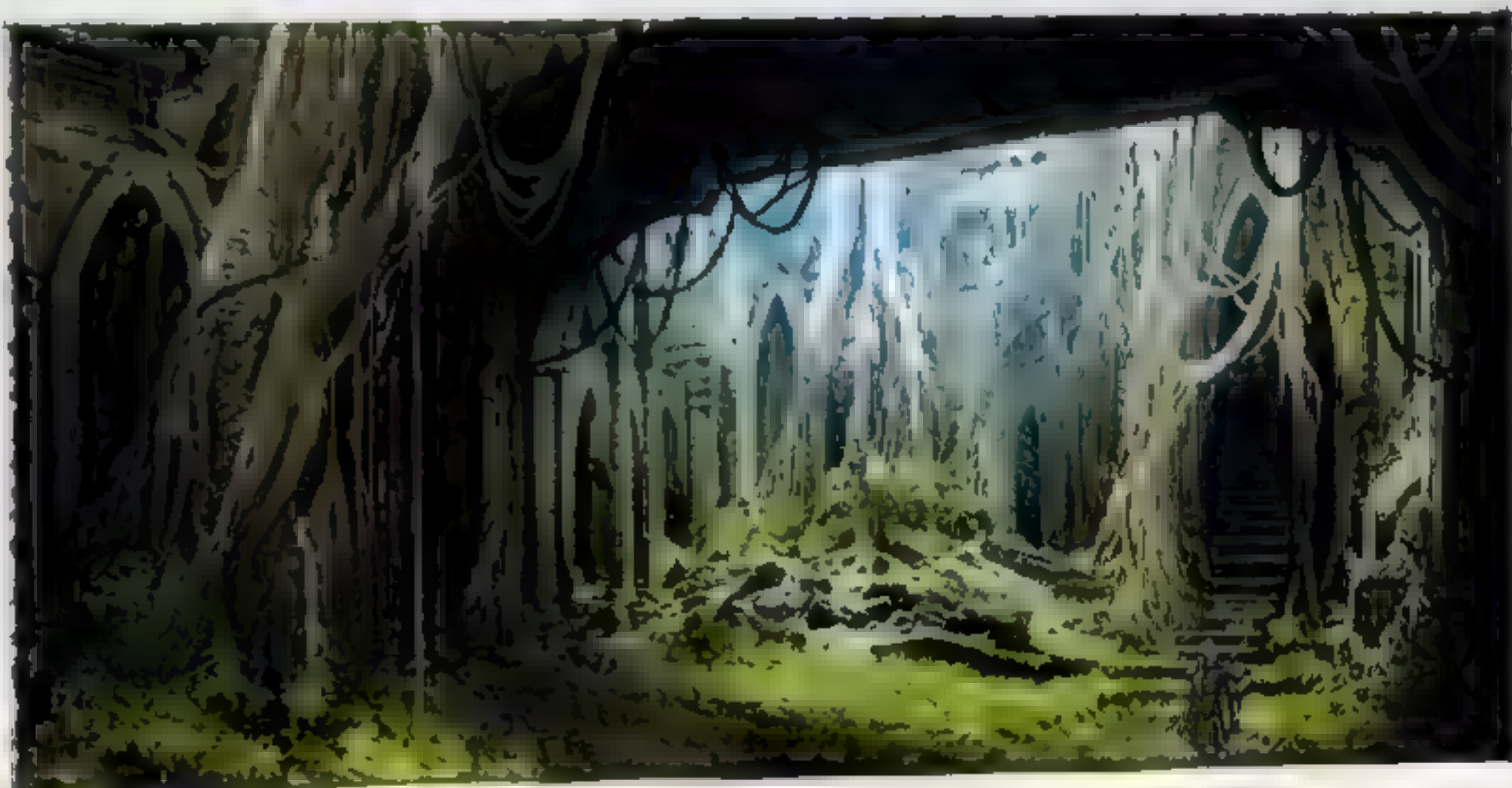
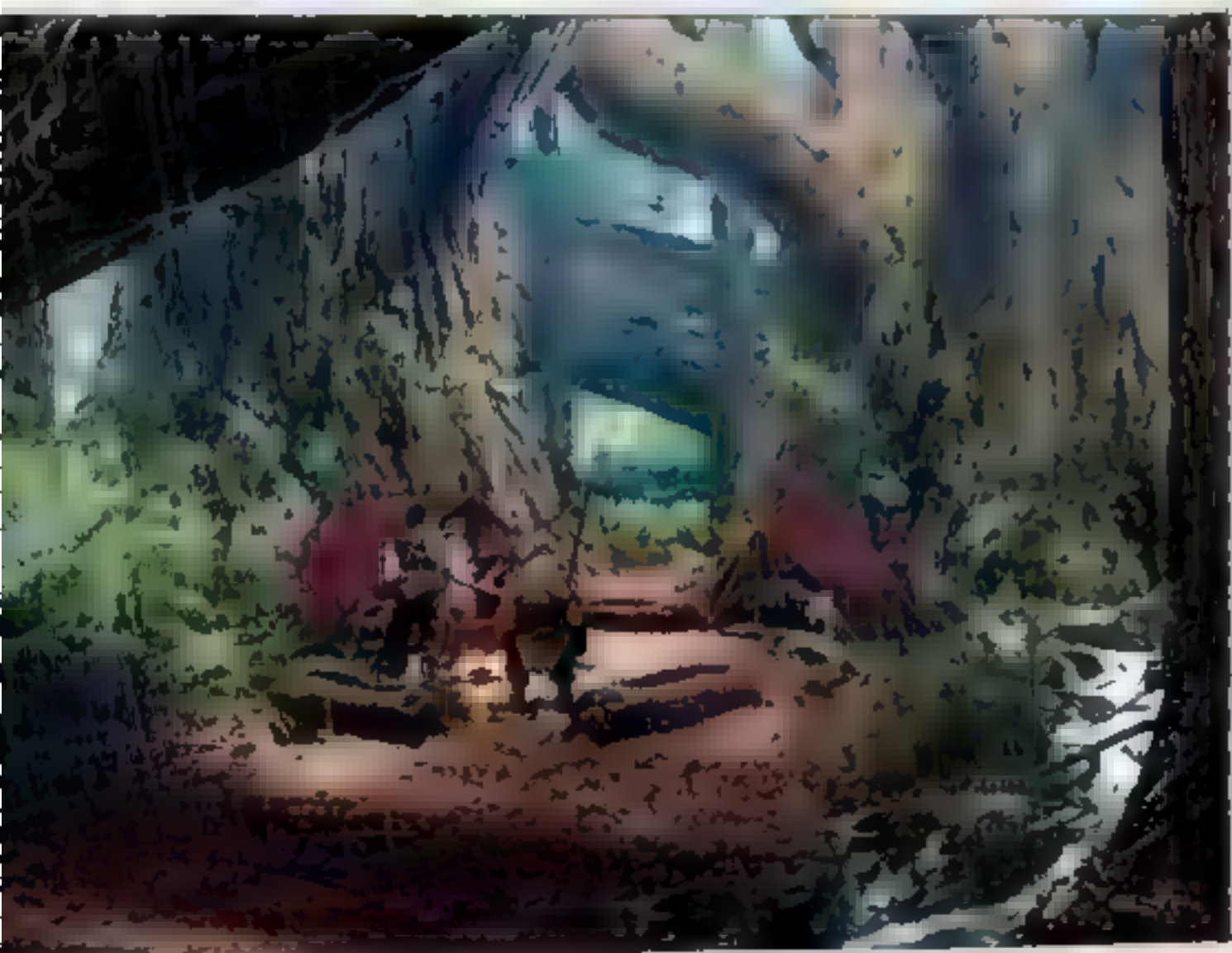




The writers sketched out plans to end the canceled Exalted March DLC with Hawke having the option to marry their love interest. This included alternate ceremonies for party members like Bethany and Sebastian if players opted not to wed. There was even a wedding dress made for Hawke. The asset found its way into *Inquisition*, donned by Sera if she marries the Inquisitor, or the Inquisitor if they marry Cullen. The dress can also be seen in an ambient NPC wedding after a chain of war table missions.



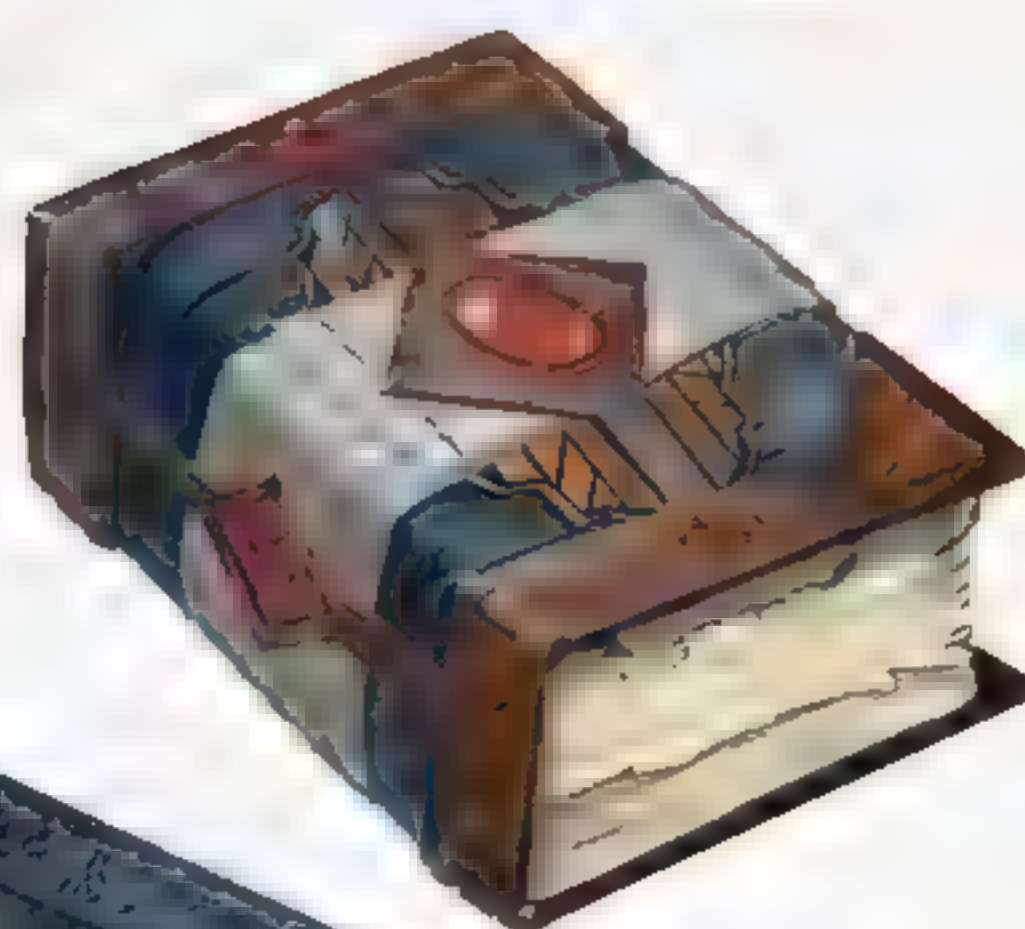
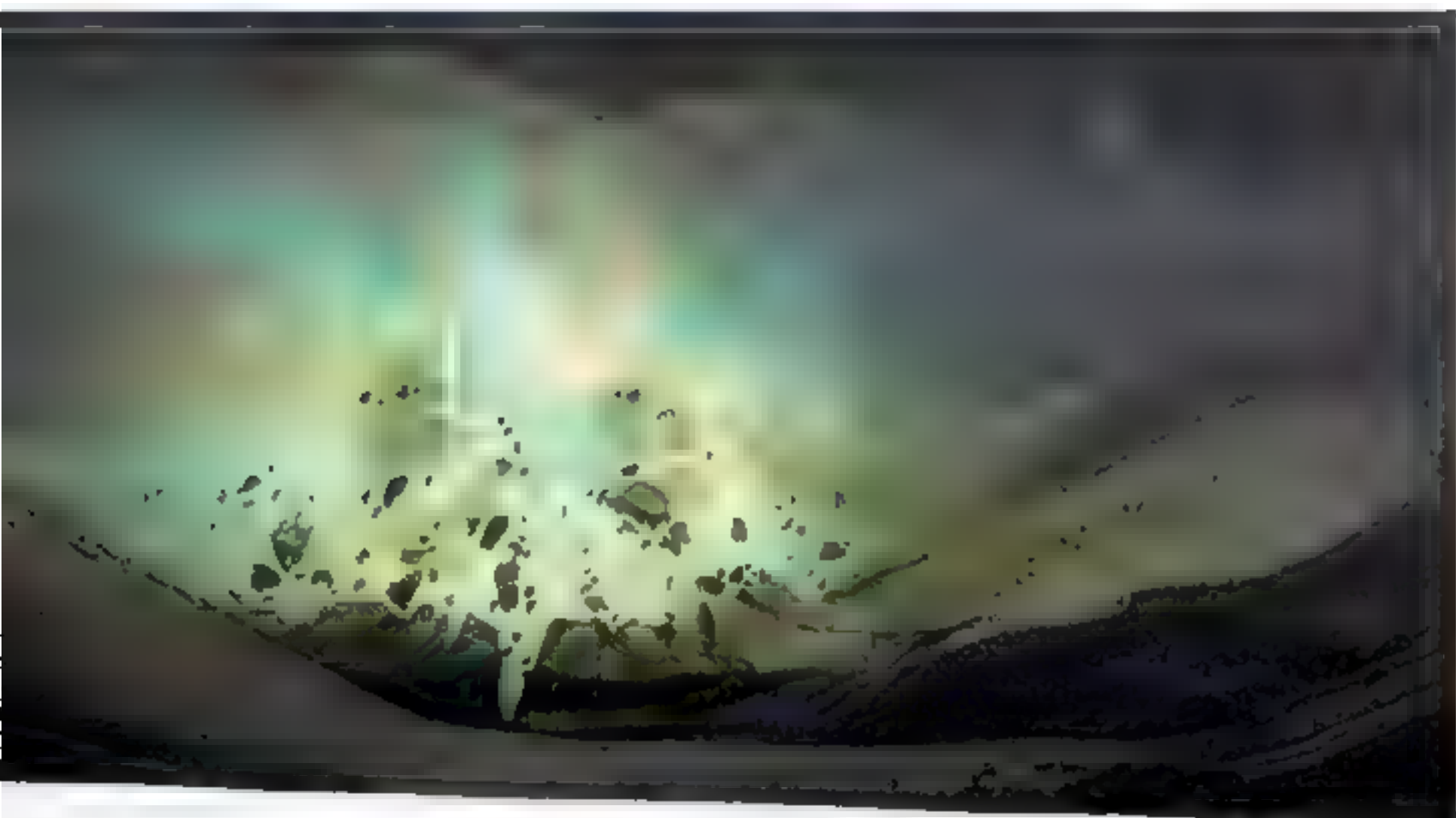
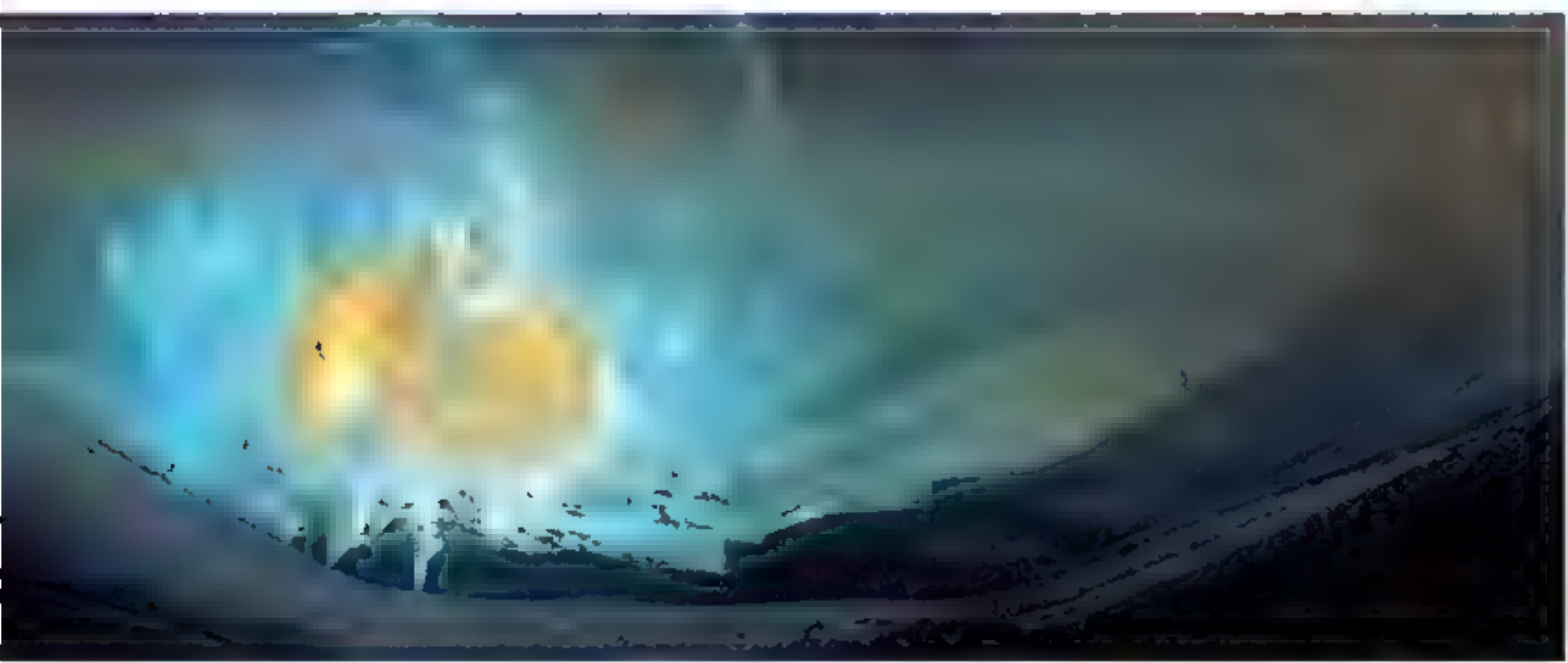
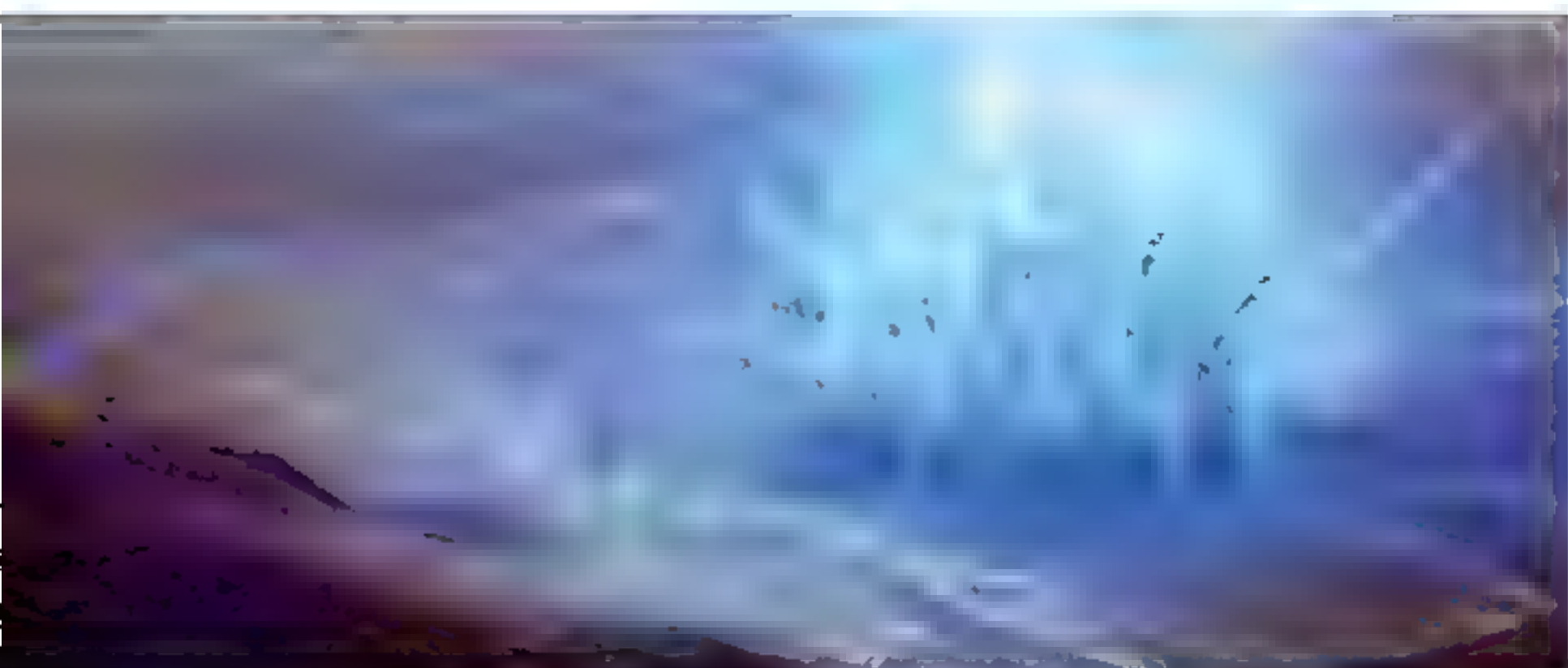












Top: The destruction of a Chantry was explored in concept art as it might have happened in Exalted March. This idea would carry over to the beginning of Inquisition.





## BIOWARRIORS CONQUER THE NORTH SASKATCHEWAN

THE ANNUAL EDMONTON Dragon Boat Festival pits teams of eighteen to twenty people in a race to swiftly row long boats with dragon heads on their bows down the North Saskatchewan River to the beat of a team drummer on the bow.

BioWare's team, the BioWarriors, were competitive, to say the least, during their run in the festival, earning a white dragon trophy in 2008 and a jade dragon trophy in 2009, both displayed with honor among Game of the Year awards and the studio's BAFTA in BioWare's lobby.

"It was so great to be out on the water at the end of a long day," says BioWare editor and longtime dragon boater Karin Weekes. "It was so fun, and the teamwork that came from getting to know people you didn't always directly interact with at work was really great."





# THE MAKING OF STAR WARS THE OLD REPUBLIC

## BIOWARE RETURNS TO A GALAXY FAR, FAR AWAY, THIS TIME BRINGING FRIENDS



### KEY FACTS STAR WARS: THE OLD REPUBLIC

#### RELEASE DATE:

December 20, 2011

#### GENRE:

MMORPG

#### PLATFORMS:

Windows

#### SELECTED EXPANSION CONTENT:

*Rise of the Hutt Cartel,  
Galactic Starfighter, Galactic  
Strongholds, Shadow of  
Revan, Knights of the Fallen  
Empire, Knights of the Eternal  
Throne, Onslaught*

Developed in Austin  
and Edmonton

Published by Electronic Arts

BIOWARE, LIKE ITS GAMES, had expansions. The first was in Austin, Texas, where work began on an MMORPG in 2006 that became *Star Wars: The Old Republic*.

The ambitious project meant hiring developers for a type of game BioWare had never made before. Austin was an ideal location, as it had a large talent base with experience in online games. So BioWare cofounder Greg Zeschuk and a small team of senior staff, including *Old Republic* game director James Ohlen, moved from Edmonton down to Austin to set things up.

"We transplanted folks down, we spent a lot of time down there, and we tried to really instill the core values," cofounder Ray Muzyka says. "We created a studio with its own identity, but also one that still very much felt like it was BioWare."

Before the move, Ray and Greg knew they wanted to make an MMORPG. "But the IP, we weren't sure about. I flew down every week for a year to negotiate the deal with Lucas. Like, I'm not joking. I'm not exaggerating," Ray says. "I took that United flight in the morning. I met for five or six hours each day. And then I flew back that evening."

Eventually, LucasArts signed on and BioWare Austin was born.

Now it was time to make the game.

#### AN EMPHASIS ON STORY

The pitch for *The Old Republic* was to combine the immersive and persistent world of an MMO with the character- and choice-driven story of a traditional BioWare game.

*Old Republic* creative director Charles Boyd began on the project as a writer in 2006, when the team was super small by MMO standards: just three rooms small. The writers had one of those rooms to themselves. Charles was actually the seventh writer hired for a project that only had between twenty and thirty developers total at the time.

"The writers were a significant contingent of that early team, because I think they knew right from the start that they were going to go massive on the story and wanted to have a big team ready to go to get ahead of it," Charles says. "Whenever they

brought in lunch or breakfast or any meals, the joke was that the writers were locusts who ate all of it, but I still think it was merely because of our numerical superiority, not through any particular gluttony."

Writing a *Star Wars* game was a dream for Charles, who had long been a fan—the kind of fan who cosplayed and knew the Expanded Universe lore back to front.

Writing in that universe had its challenges, Charles says, as they had some rules to adhere to. The weight of the movies, the books, a massive catalog of *Star Wars* history, including *Knights of the Old Republic*, loomed overhead.

But for Charles, the game's story first and foremost had to be fun.

"You want to have interesting relationships between characters, and you want to have drama, and you want to have impactful choices," Charles says, "but at the end of the day, you want players to walk away saying: 'I had a really fun time,' as opposed to other kinds of stories or games where you want to challenge the player in a way that makes them leave and say: 'Oh my gosh, I'm so, like, crushed by the emotional weight of this.'"

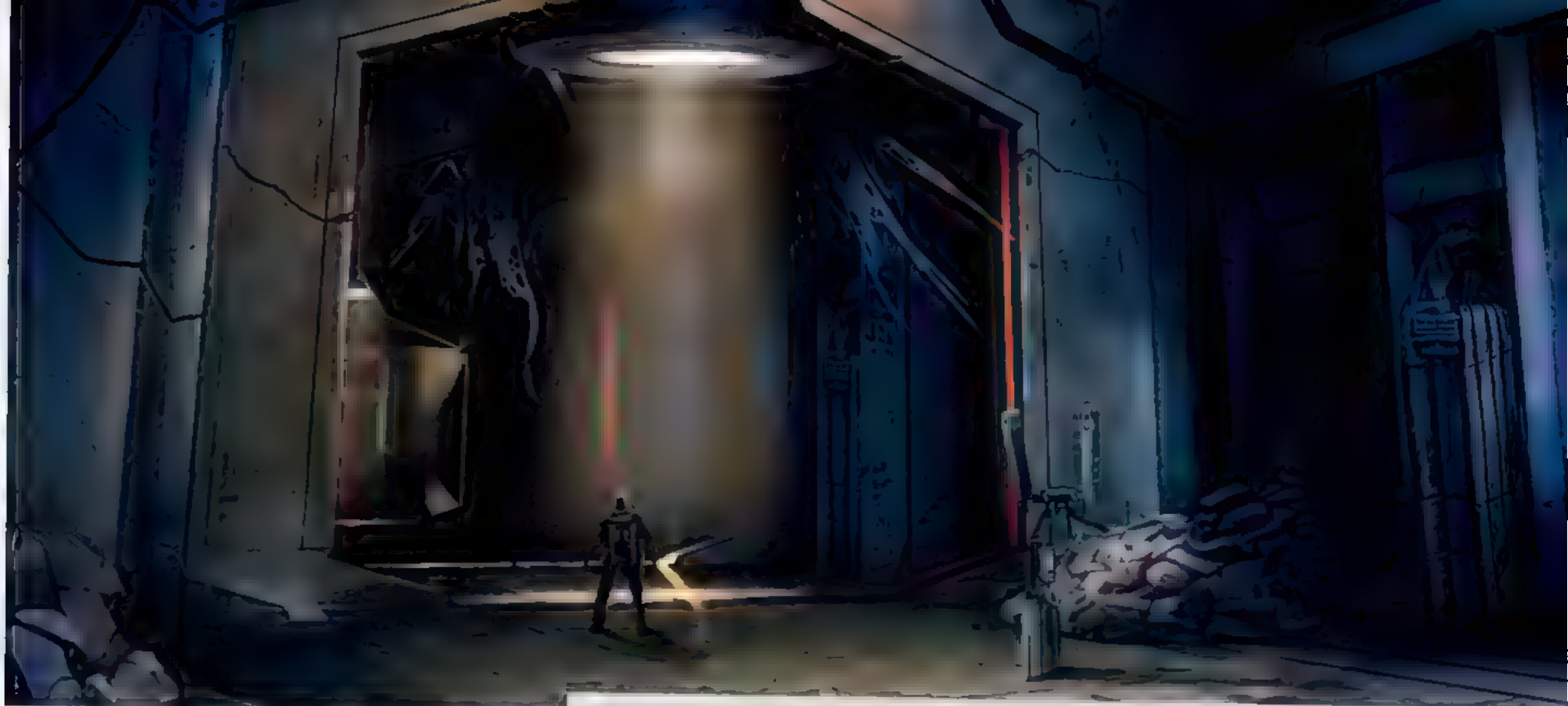
Writing a *Star Wars* game was like pouring out a box full of cool toys, looking at what was there, and figuring out how the pieces fit together. "The seemingly difficult-to-connect stuff can be connected in lots of interesting and fascinating ways," Charles says. "What seems like a limitation can actually be a spur to the imagination and push you in the directions that you hadn't considered."

#### IT TAKES A VILLAGE TO BUILD A GALAXY

At peak production, *The Old Republic* had teams working at BioWare Austin and BioWare Edmonton, an early experiment in cross-studio development for BioWare that would extend to future projects like *Mass Effect: Andromeda* and *Anthem*. Austin had by far the biggest contingent of developers, though. As the team grew, it moved into increasingly larger office spaces.

By the time the game shipped in December 2011, the team numbered in the hundreds, working in a sprawling single-floor space, roughly two football





fields in size, in the area of Austin known as the Domain. The Domain has since become a massive commercial hub for Austin, but at the time, the BioWare Austin office was mostly surrounded by parking lots, in a building attached to a culinary school.

There, BioWare Austin had ballooned to a team that included more than thirty environment artists, some twenty-six cinematic designers, about forty level designers (credited as “world designers”), and countless others, all working tirelessly for years to build enough content to keep players busy on launch day and far beyond.

#### THE WAR ROOM ON LAUNCH DAY

Community manager Eric Musco started at BioWare Austin in September 2011, three months before the game launched.

He remembers being in the studio “war room,” with projectors on the wall showing the status of servers and game content, the day they turned the servers on and *The Old Republic* went live for players.

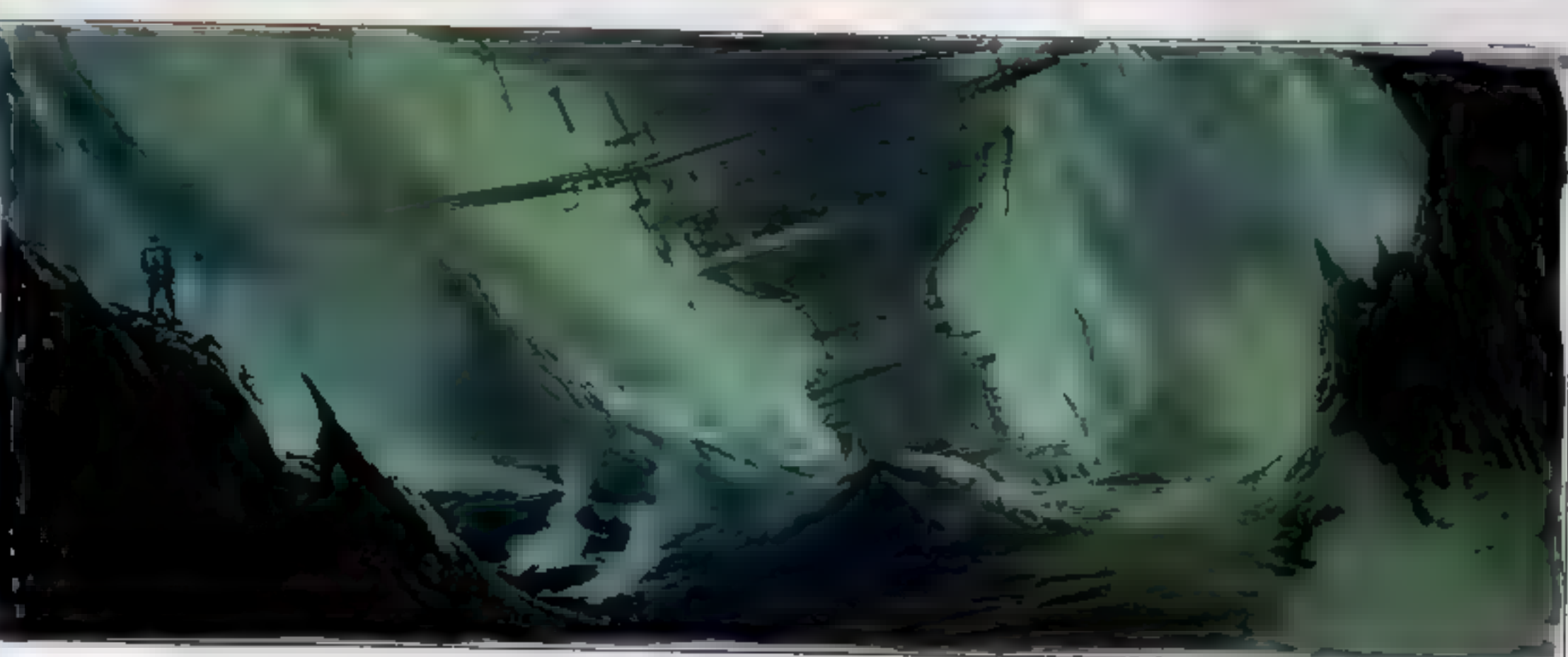
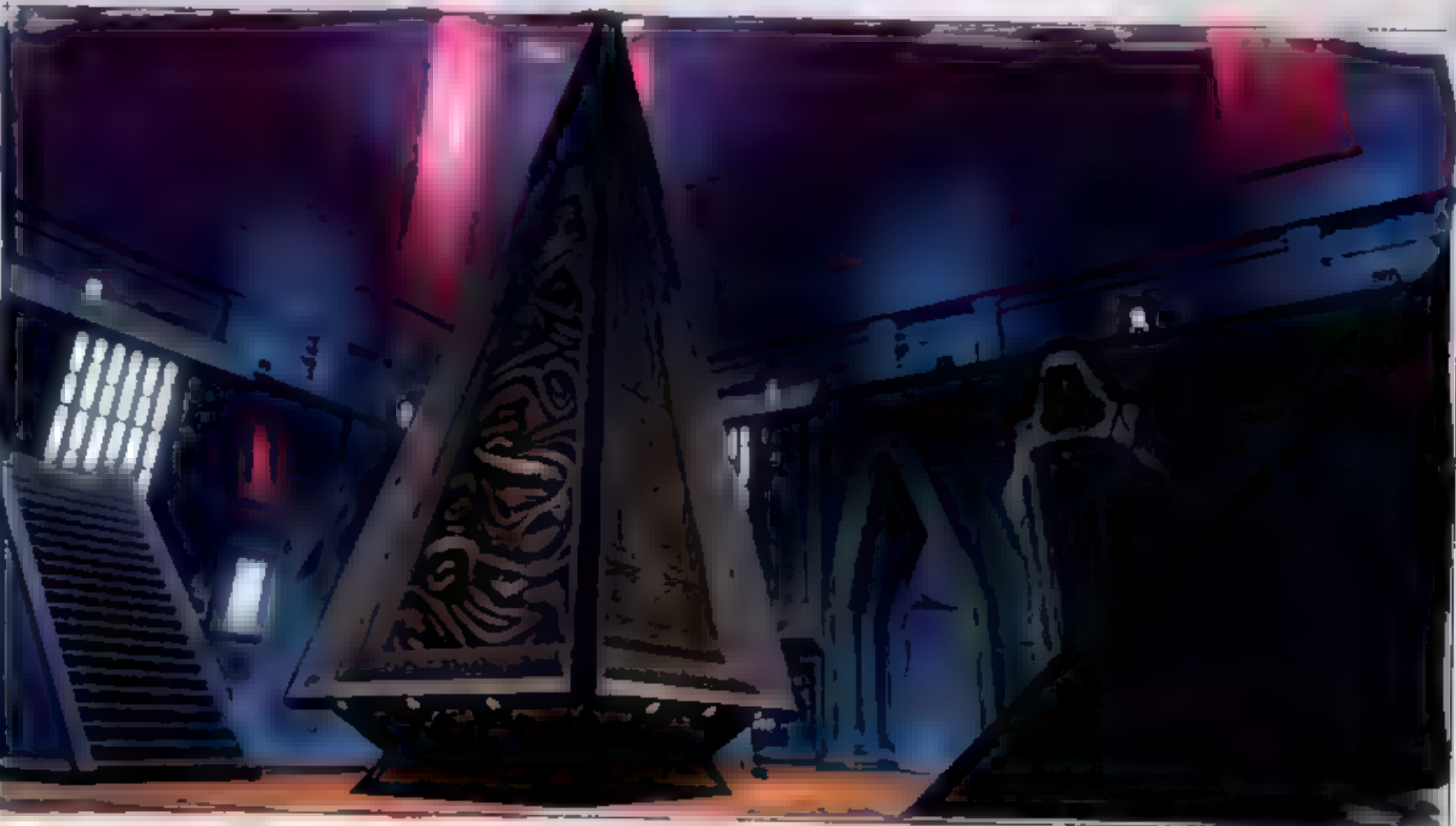
“There’s got to be sixty to a hundred people cramped in this little area, just watching as this giant dashboard goes from everything being red to just green, green, green, green, green, green, green as we just watched the servers turning on,” says Eric, who helped run the game’s social media accounts. “There’s hundreds of thousands of people logging into the game very quickly. I’m just standing there, enamored by this crazy sight of the game opening, and my boss at the time comes up and shakes my shoulder. I look at him and he’s like, ‘You know we just opened the game, right? We need to work!’”

The launch of *The Old Republic* was unusually smooth.

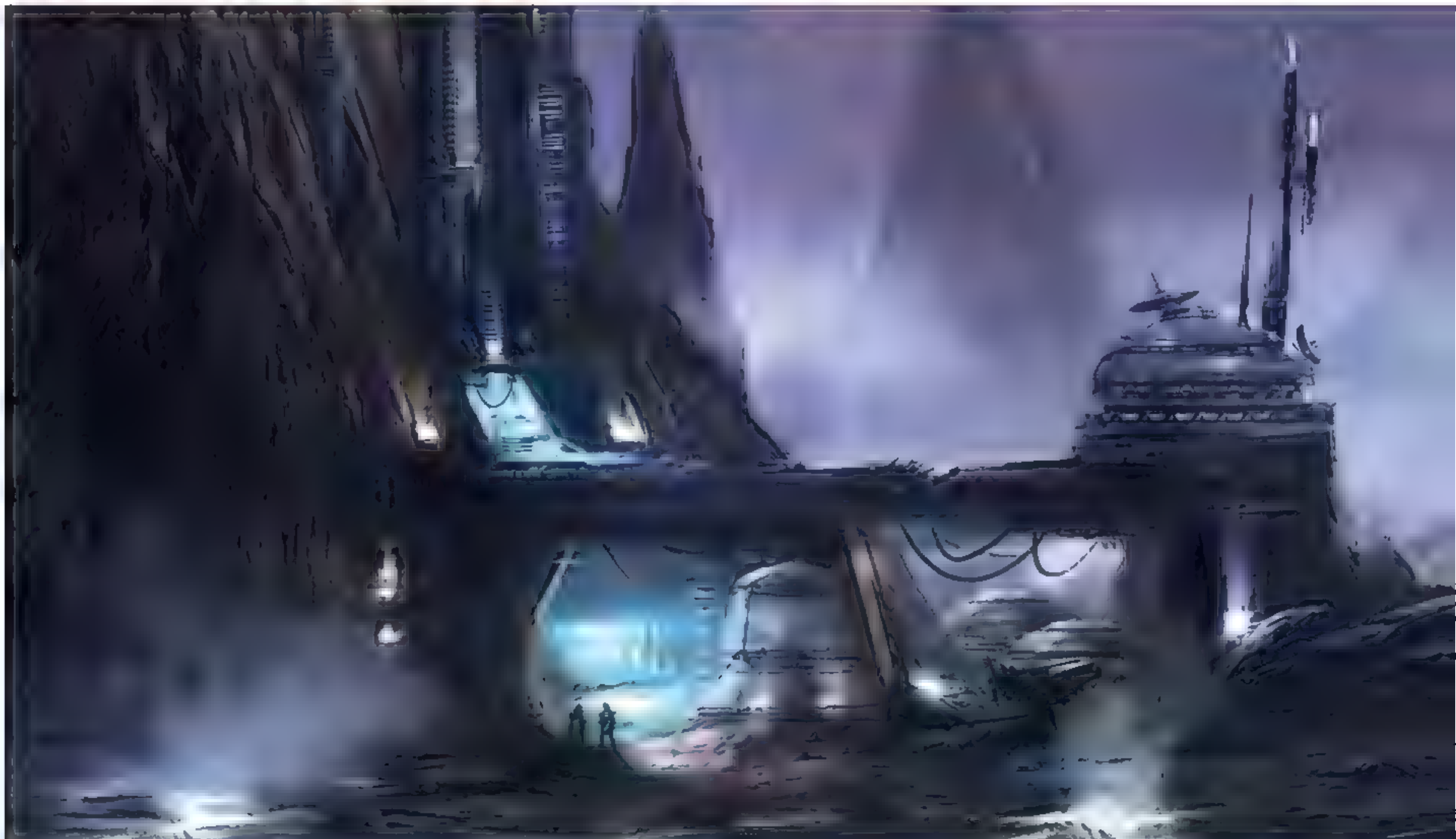
“We were pretty lucky in that we didn’t have a lot of the problems that other MMOs have faced. Our game stayed up and stayed stable,” Eric says. “The biggest problem was that we had queues.”

Eric describes it as “controlled chaos” as they made decisions to spin up servers on the fly to accommodate the number of players logging on.

“It was the best problem to have: Too many people wanted to play the game.”



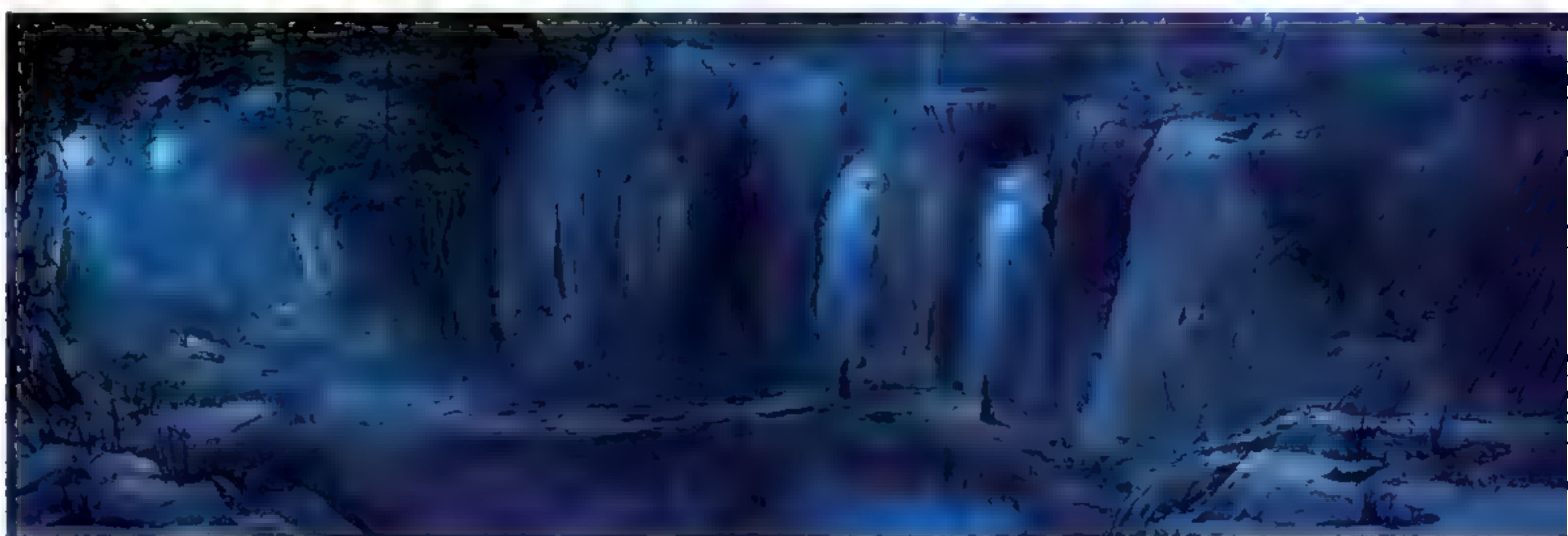
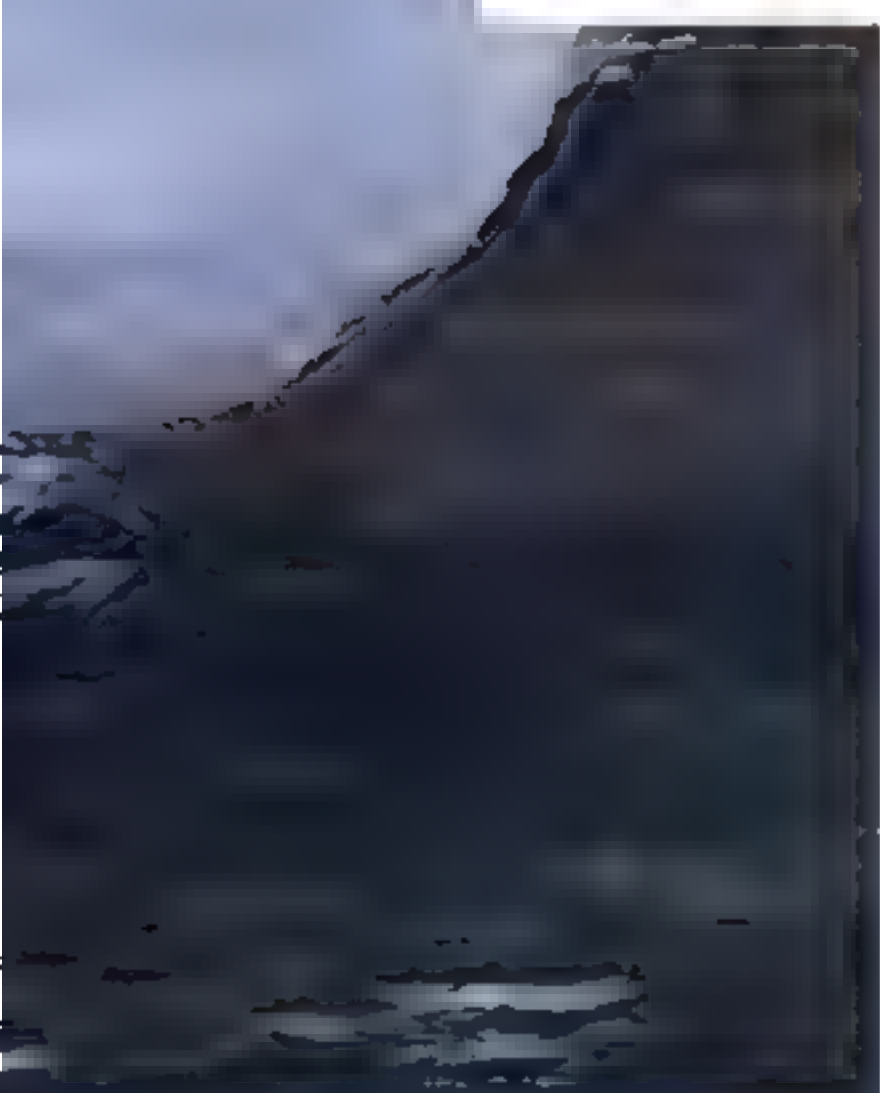
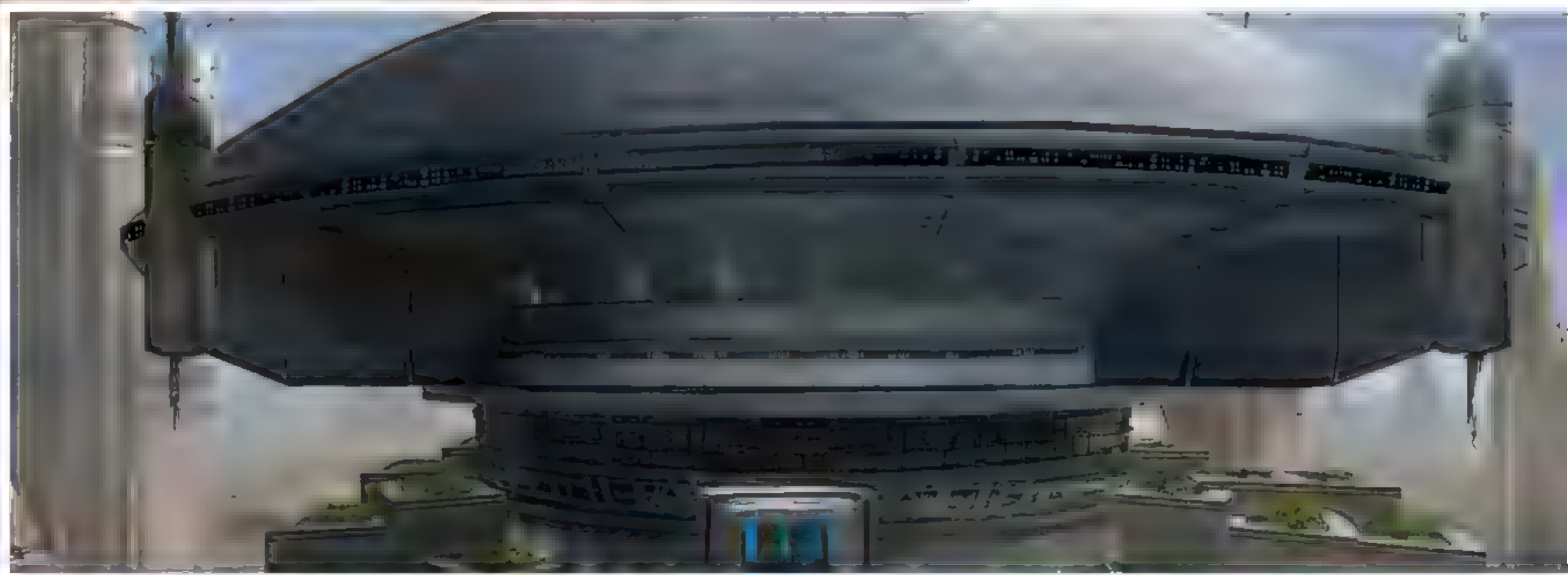








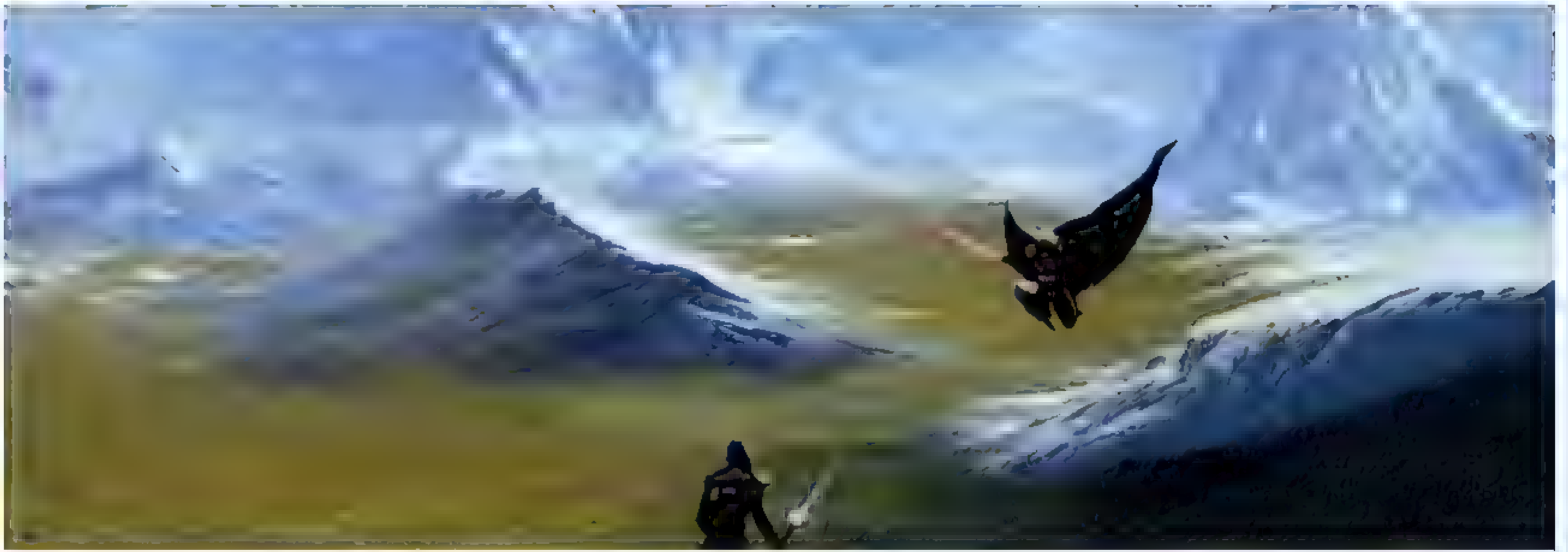
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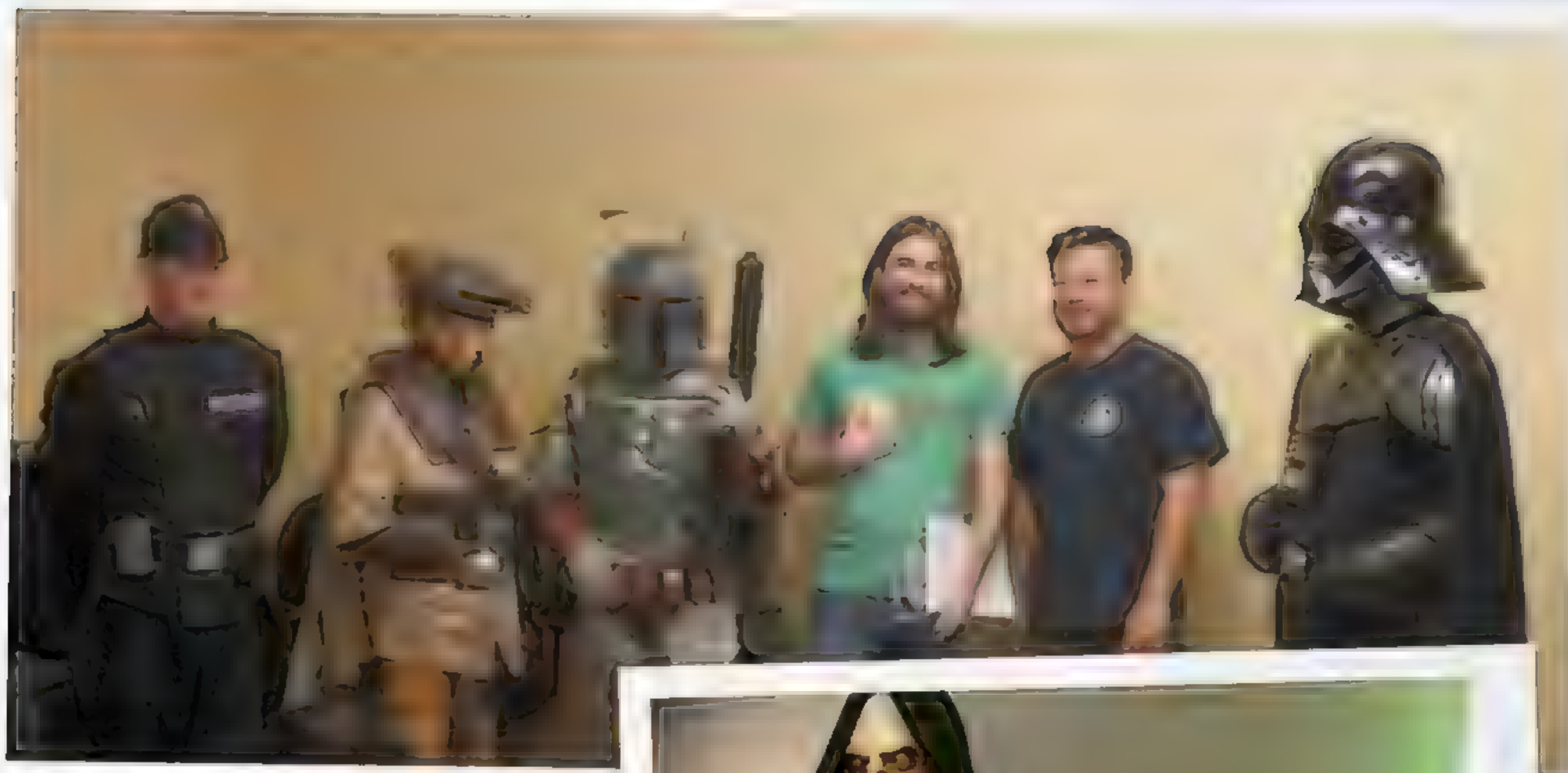
## FREE TABLE FINDS

WHEN BIOWARE EDMONTON developers had old graphics cards, comic books, or games they wanted to get rid of, they'd leave these and other treasures on a "free table" in the Terrace Office Tower studio kitchens for others to inherit. Here is a small sampling of weirder items found on the free table over the years:

- *Concept art sketches from Neverwinter Nights*
- *Sega Dreamcast with four controllers, VMUs, and games*
- *Crockpot*
- *Neti pot*
- *BioWare-branded Magic 8 Ball (see page 113)*
- *Knights of the Old Republic cardboard advertising standee*
- *Complete set of Discworld paperbacks*
- *Wooden decoy duck*
- *Beadwork-decorated lizard figurine*







## AN OFFICE INDUCTION

STAR WARS DEVELOPER JOINS THE 501ST

WHEN HE'S NOT WORKING on *Star Wars: The Old Republic*, creative director Charles Boyd is a Jedi. And an Imperial Security officer. And a Mandalorian Merc. The avid *Star Wars* costumer was dressing up as *Star Wars* characters before he ever got a job on the game. And as a member of the legendary fan group known as the 501st Legion, he continues to dress up as various *Star Wars* villains whenever there's a chance.

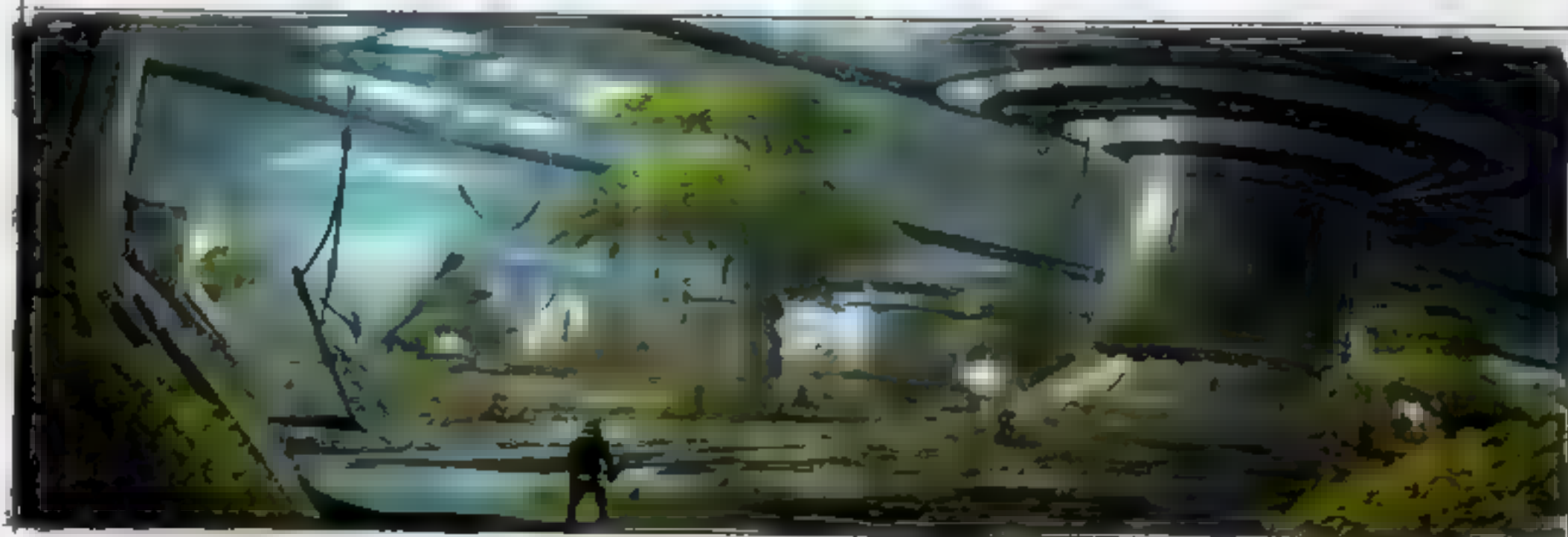
There was one time, though, that the 501st came to BioWare. Charles had been an honorary member of the Legion. But after years of work, it was time for his proper induction. He was having a bad day. He and his partner were buying their first house, and as these things go, it was getting stressful, when a mysterious meeting popped into his inbox. Something from the head of cinematics, who also happened to be a 501st member.

"He had booked a meeting under false pretenses and got me to come into the meeting room, where I found Darth Vader and Boba Fett and Boushh and stormtroopers and everything waiting for me with a really cool plaque," Charles says. "It was a real honor and was a really cool day."

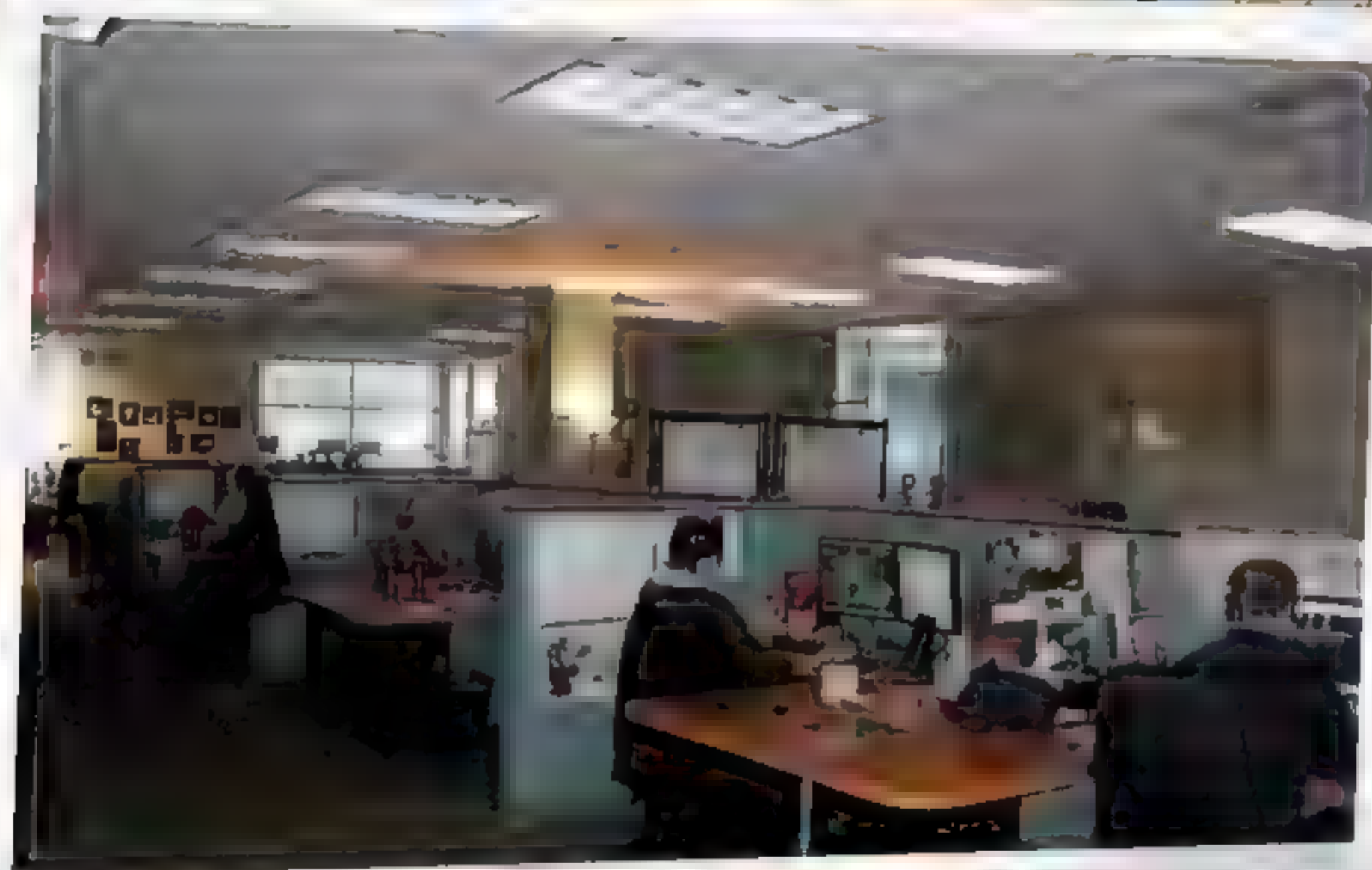
For other devs, it was just another day at BioWare. *The Old Republic* writer Joanna Berry remembers being in the lobby of the studio, only to see a conference door open and Darth Vader stride out, followed by Boba Fett and a bunch of stormtroopers.

"I didn't bat an eye," Jo says. "Oh, it's just Darth Vader," she remembers thinking. "After all, there was a seven-foot statue of Darth Malgus in reception. Funny what working on a *Star Wars* game does to your mind."

BioWare cofounders Ray Muzyka and Greg Zeschuk are honorary members of the 501st.







## THE FLOODING OF BIOWARE AUSTIN

THE DAY *THE OLD REPUBLIC* ALMOST WASHED AWAY

AT THE HEIGHT OF *The Old Republic's* development, BioWare Austin flooded. The studio, located at the time in Austin's Domain shopping district, was on the ground floor of a building that was technically below ground level. Cinematic designer Bret Hoffman was in the studio when a massive rainstorm hit the city, effectively overflowing a moat around the building.

"There was no place for overflow to go, except into the building," Bret says.

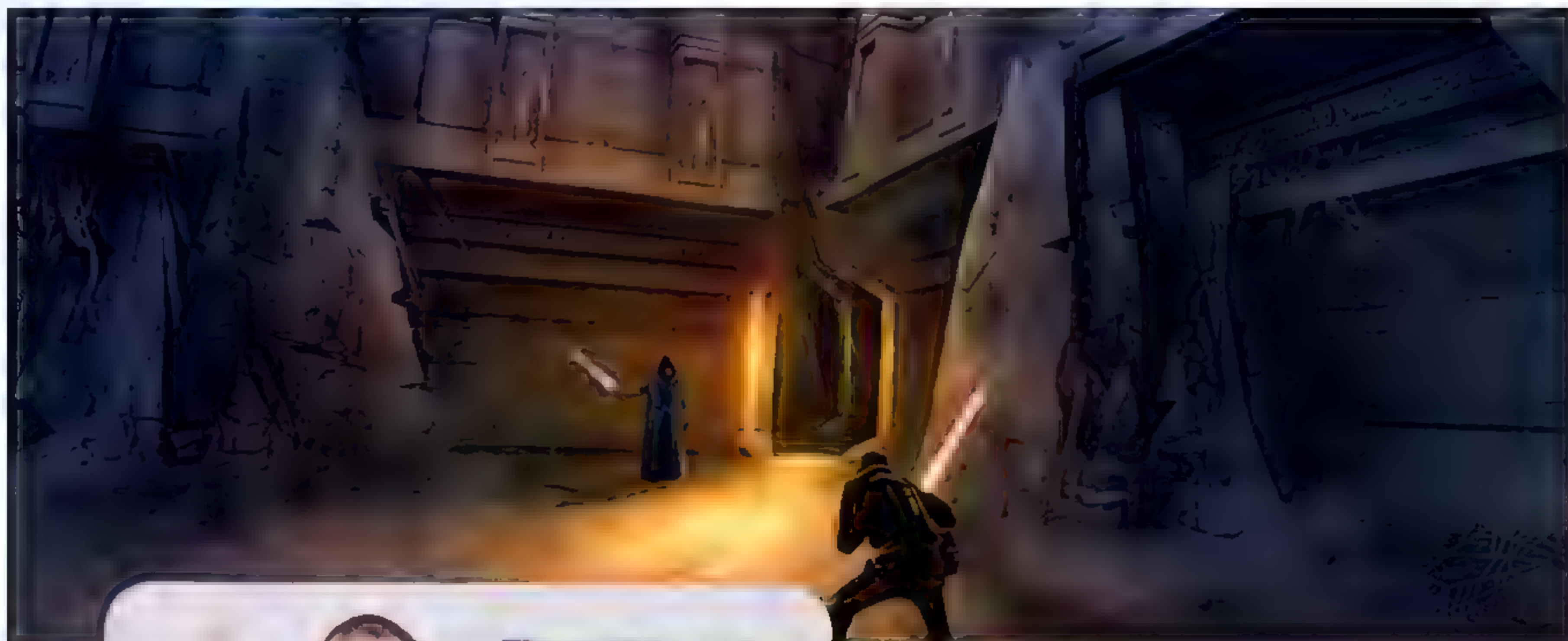
Water poured into the studio lobby. The developers still in the office began to desperately try to block the water, building walls of desk storage units shored up by towels and whatever else they could find.

Others ran around the studio moving everyone's PCs off the ground so they wouldn't get soaked.

"Luckily the water didn't quite make it to our server room, which was probably a solid 150 feet into the building," Bret says. But much of the studio was carpeted, "which meant every wall soaked in all the water. They had to rip out all the carpeting and saw off the bottom two feet of every wall," Bret says. Teams were relocated to large tables in meeting rooms to continue work on *Star Wars: The Old Republic*.

"We were fully into development. It was just a little prior to beta," Bret says.





## THE DOCTORS RETIRE

RAY AND GREG MOVE ON

IN THE SPRING OF 2012, Ray Muzyka and Greg Zeschuk gave notice that they were leaving BioWare, a company they'd built from Greg's basement into an industry legend with multiple studios and a catalog of classic games.

Their jobs had evolved to the point where they were traveling most of the year. Ray says he was on the road 250 days in his last year at BioWare, with Greg counting 205 days away, mostly spent in Austin.

"We were really worn out," Greg says. "I think one thing folks don't talk about is burnout." A common question they would get was how they could possibly maintain the energy to keep doing the job.

"Eventually, we ran out of it," Greg says.

It was time for something new.

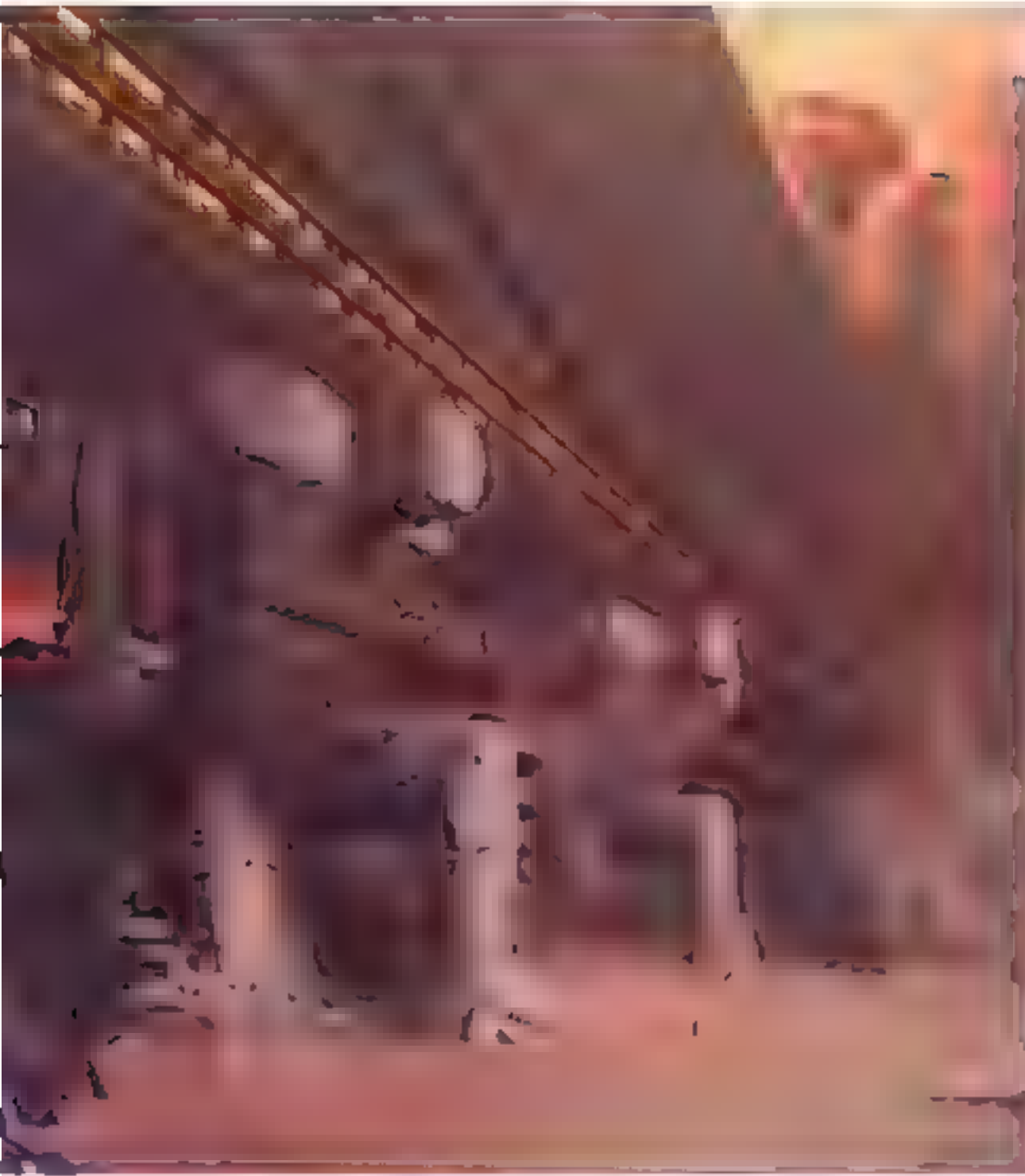
Ray and Greg both gave six months' notice within a week of one another. They wrestled with the right time and the right way to tell people in the office, hoping for a smooth transition. Ray remembers slowly taking his stuff home, lugging bags out before anyone knew he was leaving. He wondered if anyone would catch him and ask what he was doing. No one did.

When it came time to tell the studio, the doctors called an all-hands meeting in Edmonton at the adjoining Radisson. BioWare teams in Edmonton, Montreal, and Austin toasted the doctors' legacy with champagne before hundreds of Edmonton developers lined the halls of the studio's second floor, waiting for their turn to personally say goodbye.

"We felt our team was ready to take on the challenge without us to advance and do cool new things. We wanted to give some new people some opportunity to become studio leaders," Ray says. "It felt like it was time."

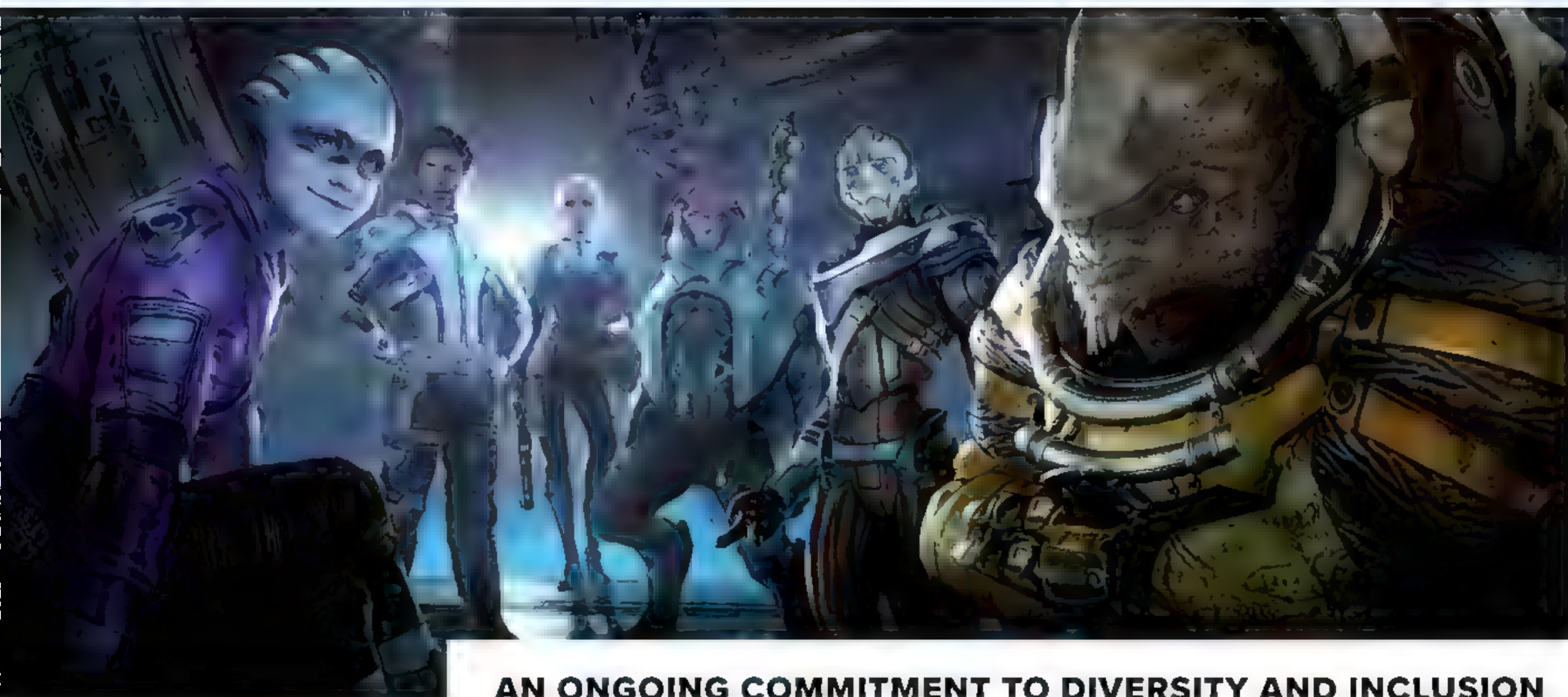
Ray began angel and impact investing in social enterprise, technology, and medtech/healthtech through his firm ThresholdImpact, while Greg founded a craft brewing company called Blind Enthusiasm and an accompanying restaurant, Biera. Both men remained in Edmonton, though Ray divides his time between the city and a second home in Las Vegas.





By the time it was time to start putting the story of *Star Wars: The Old Republic* together, the team had already had a lot of time to think about the game's story. The MMO RPG aimed to be a record for the largest Entertainment Weekly Online Poll, even more upon its release in 2012.





## AN ONGOING COMMITMENT TO DIVERSITY AND INCLUSION

FROM ITS EARLIEST YEARS, BioWare has pushed to make games for everyone, ensuring a diversity of players is reflected in the far-reaching worlds of the *Mass Effect* universe to Thedas and well beyond. LGBTQ characters and romances have been pillars of BioWare experiences and it's a given that players have the option to play as a variety of genders and backgrounds in a BioWare game—customization that can be traced all the way back to the character generator in the first *Baldur's Gate*.

"Years and years—in fact probably more than a decade—before I ever played a BioWare game, I was aware of their excellent reputation for diverse representation," says Emily Taylor, a senior level designer who has been working in games since 2007. "From playable female lead characters like FemShep to canonically gay, bi, and trans characters, BioWare is extremely well known for supporting diversity in advance of most of the industry. As a woman who's loved playing computer games since *Pac-Man* was in arcades, it's always been

particularly important to me to see games that represent the full diversity of the player base, so I was absolutely delighted to join the BioWare team in 2018 and be able to contribute to the future of the *Dragon Age* franchise."

BioWare also recognizes that the studio is still learning and growing some twenty-five years into its existence.

Like most game studios founded in the nineties, BioWare was started by men. People of many genders and backgrounds have since joined the studio in increasing numbers, but BioWare continues to do the work needed to do better on these fronts—for its developers and its community of fans.

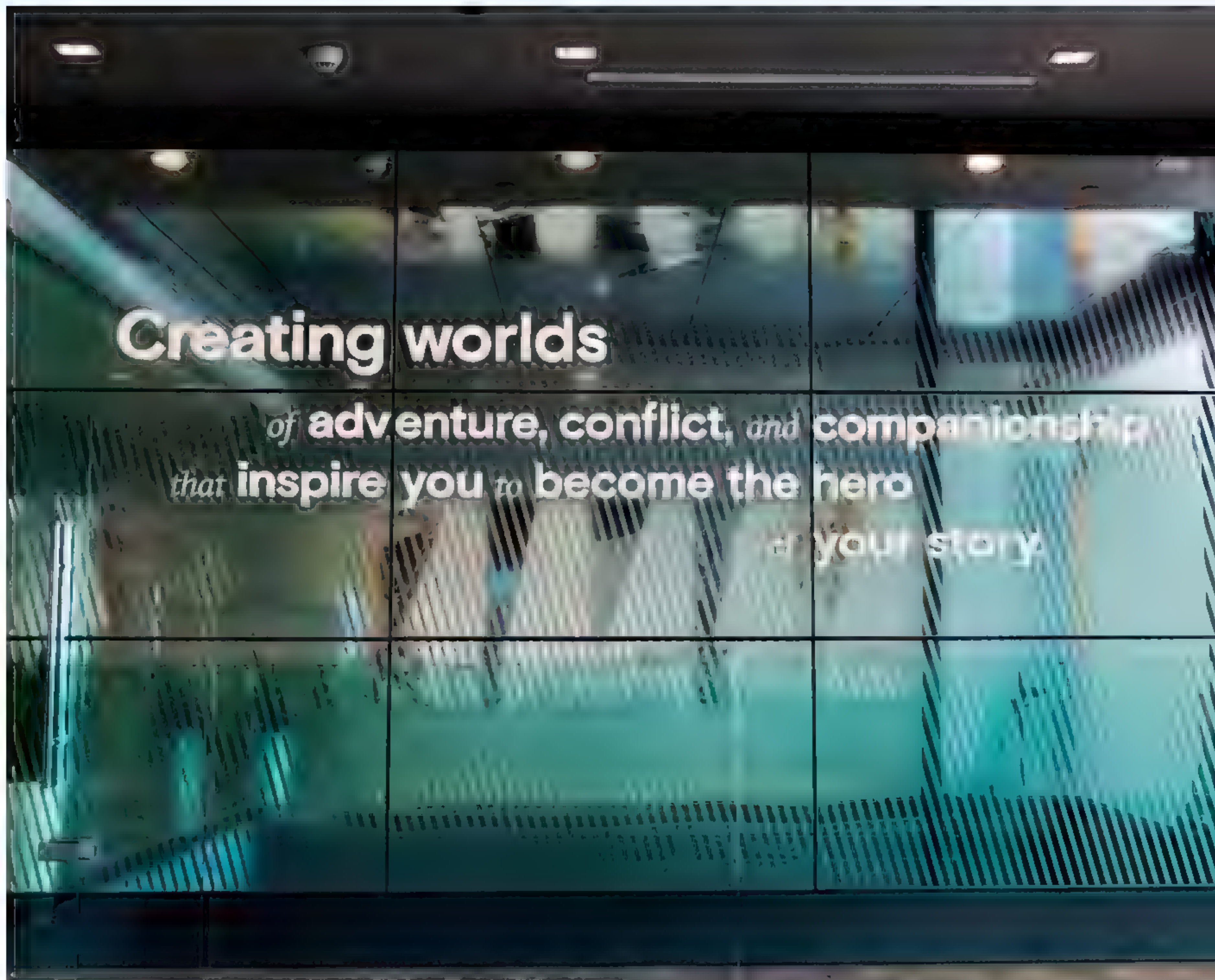
"Representation matters," studio general manager Casey Hudson says. "It's at the heart of our studio's mission. Inspiring players to become the hero of their story means they should be able to see themselves in our games, and just as importantly, in the teams that create them."

"I joined BioWare in 2010 and I've been so happy to see that, year after year, we are still striving to improve representation in our games. Even when mistakes are made or we stumble, the conversation is 'How can we do better next time?' with an honest desire to improve. So many of us here know how important it can be to see yourself in the games you play and the stories you enjoy, and we want to be able to give that kind of joy to our players. It has me very excited for things to come."

—Rachel Hammond, online engineer  
on *SWTOR* and *Anthem*







## LEADING BY EXAMPLE

HOW THE DOCTORS DEFINED WHAT MAKES BIOWARE BIOWARE

**EARLY IN BIOWARE'S LIFE**, cofounders Ray Muzyka and Greg Zeschuk defined core values and a mission statement to stand as guideposts for every major decision BioWare made as a company.

BioWare's core values sought to balance integrity and humility with quality in the studio, products, and business practices.

"Integrity and humility are sort of like outward- and inward-facing expressions of being true and honest with yourself and with others," Ray says.

He believes BioWare is at its best when all these things are balanced. Push too hard for quality in products, for example, and workplace quality will suffer. Focus exclusively on quality in the workplace, however, and the products will be neglected.

The doctors worked hard to represent these values in their own day-to-day practices. Though they were the bosses, Ray and Greg famously

shared one tiny rabbit hole in BioWare's Terrace Office Tower studio, an office without natural light that had room for two standing desks and not much else.

Ray also refused to throw out his desk chair. His reasoning: He didn't need a new one so long as the chair still did its job.

"It was worse than sitting on a block of wood. There was no cushion left in it anymore. We reattached the arms on that thing three times," recalls former senior director of business planning and development Richard Iwaniuk.

"He had the same desk and the same chair the entire time he worked there, pretty much. He finally had to get rid of the chair because it just broke to nothing. But that's just who he was.

"Greg was the same way. It was just that humility."

BioWare's core values sought to balance integrity and humility with quality in the studio, products, and business practices. The doctors worked hard to represent these values in their own day-to-day practices. Though they were the bosses, Ray and Greg famously shared one tiny rabbit hole in BioWare's Terrace Office Tower studio, an office without natural light that had room for two standing desks and not much else.

### BIOWARE'S CORE VALUES:

Humility and integrity, core values and a mission statement to stand as guideposts for every major decision BioWare made as a company.

### BIOWARE'S MISSION:

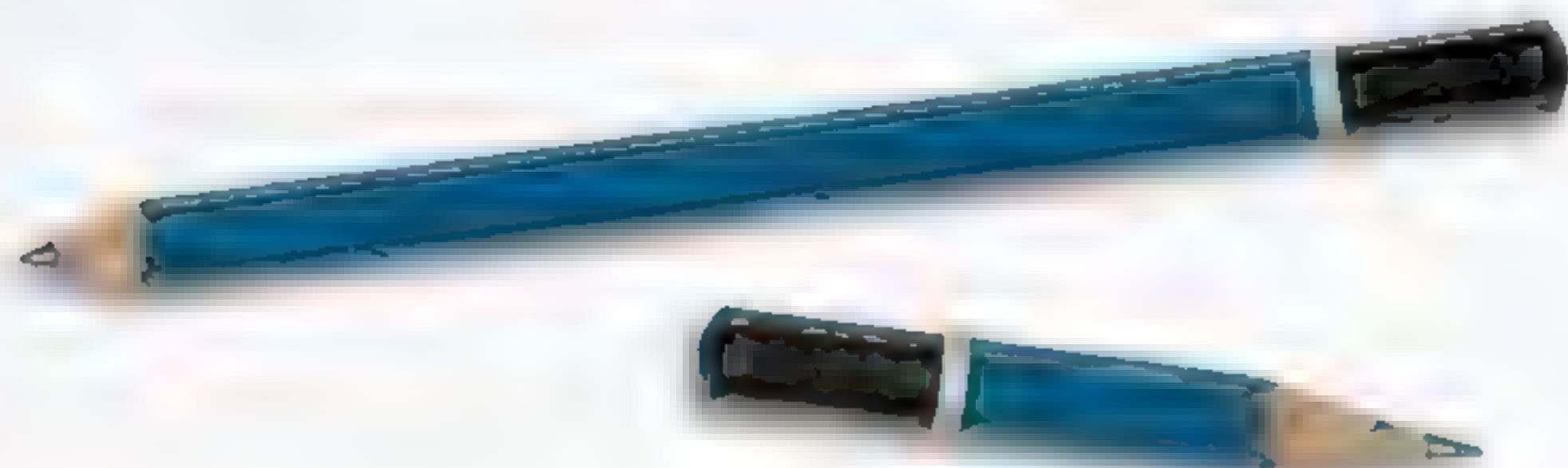
Creating worlds of adventure, conflict, and companionship that inspire you to become the hero of your story.





## THE MAKING OF

# MASS EFFECT



### END OF AN ERA MARKS THE BEGINNING OF ANOTHER



#### KEY FACTS MASS EFFECT 3

**RELEASE DATE:**

March 6, 2012

**GENRE:**

Action RPG

**PLATFORMS:**

Xbox 360, PlayStation 3,  
Windows, Nintendo Wii U

**SELECTED EXPANSION CONTENT:**

*From Ashes, Leviathan,  
Omega, Citadel,  
Extended Cut*

Developed in Edmonton and  
Montreal (*Omega* DLC)

Published by Electronic Arts

**MASS EFFECT 3** MARKED the end of Shepard's story as the events and decisions made during *Mass Effect* and *Mass Effect 2* played out in epic fashion. Shepard pulled together what remained of the galaxy's forces, now under full assault from the Reapers, for a climactic confrontation with a compromised Illusive Man. *Mass Effect 3* brought together squad mates from the first two games, added new characters, refined series gameplay, and introduced a wildly popular cooperative multiplayer mode that saw players taking on waves of geth, Reapers, Cerberus troops, and Collectors.

**FEMSHEP SAYS GOODBYE**

Saying goodbye to Shepard was as difficult for the development team as it was for players. *Mass Effect 3* voice-over producer Caroline Livingstone remembers being in the booth with Jennifer Hale for her last session as FemShep. Scenes they worked through included some pretty heavy stuff: Anderson's death at the end of the game and a quiet character moment with Garrus.

"We were in the session, and we both just started crying," Caroline says. "I couldn't come on the line and give her notes because I was crying, and she was crying. And so there was just this long, like, minute-long pause of nothing, nothing, nothing—just silence through the airwaves. And then I came on and just told her that I was crying and she said: 'I'm crying!'"

**KINECTING WITH THE SQUAD**

*Mass Effect 3*'s Xbox and PC versions included voice support for Microsoft Kinect, allowing players to control their squad and choose conversation options by speaking out loud. The system required developers to teach Kinect hundreds of commands in a variety of accents across multiple languages.

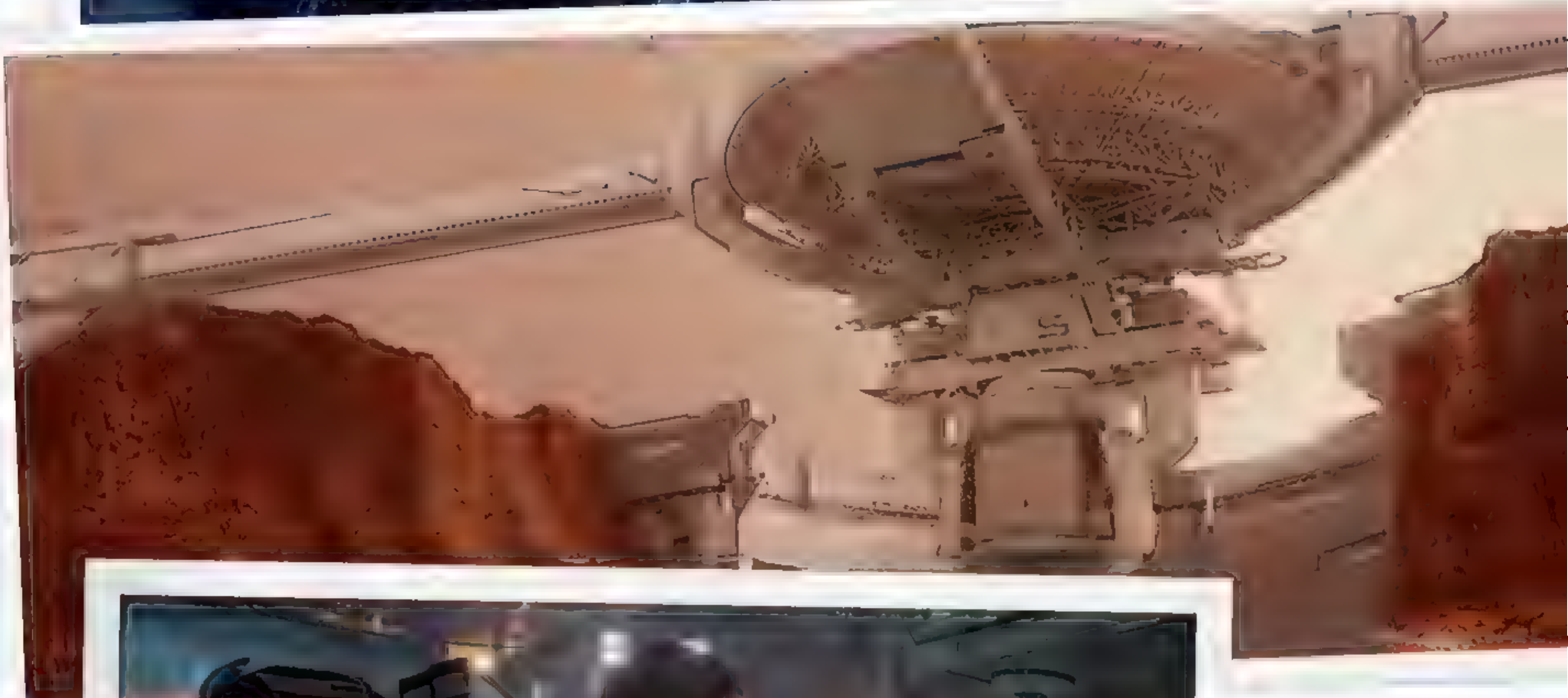
"You could go into the bar and just talk to different people," game director Casey Hudson says. "I loved walking up to a character and starting a conversation and putting the controller down. And literally just talking to the character in the game."

But the result, while useful, also made for some awkward moments. The *Mass Effect* series has become famous for the difficult choices often presented to the player, and the third installment was no exception, forcing players to make life-or-death decisions in conversation.

"What I've heard from a lot of people is when they get to a really difficult choice point, they put down the controller and they really think about it. They'll go and walk around the room and go get something to eat and come back and sit down, because they're really thinking about what they should do," Casey says.

The presence of the Kinect in *Mass Effect 3* sometimes helped players make these decisions inadvertently. Numerous players accidentally said "geth" or "quarian" while talking out a particular decision, only to turn back to the game and find Tali dead.





*Mass Effect 3's game-long climactic battle to save Earth from the Reapers showed the toll the invasion took on humanity's home planet and far beyond*









## TANKS FOR THE SOUVENIR

SHELL FROM LIVE FIRE RECORDING  
MAKES THE ROUNDS

**TO CAPTURE COMBAT SOUNDS** for *Mass Effect 3*, designers took a field trip to CFB Wainwright, a military base southeast of Edmonton.

"They gave us a big tour of this base and I got to record whatever I could find there," *Mass Effect 3* audio designer Joel Green says.

"I was looking for weapon sounds or anything cool that we could use for *Mass Effect* primarily, and the tour ended with us getting to drive and shoot tanks. Like full-size tanks. I wish I knew what the model was. But I actually got to go inside and sit and, like, pilot and shoot real shells."

The force of the sound sent waves through Joel. He remembers feeling his whole chest compress when it went off. The perfect amount of power for the Black Widow, the game's most powerful sniper rifle.

After the trip, the soldiers let Joel keep the 105 mm shell he fired. When Joel left BioWare, he gave the shell to *Mass Effect 3* gameplay designer Corey Gaspur, who in turn gifted it to *Anthem* gameplay designer Baldwin Li.

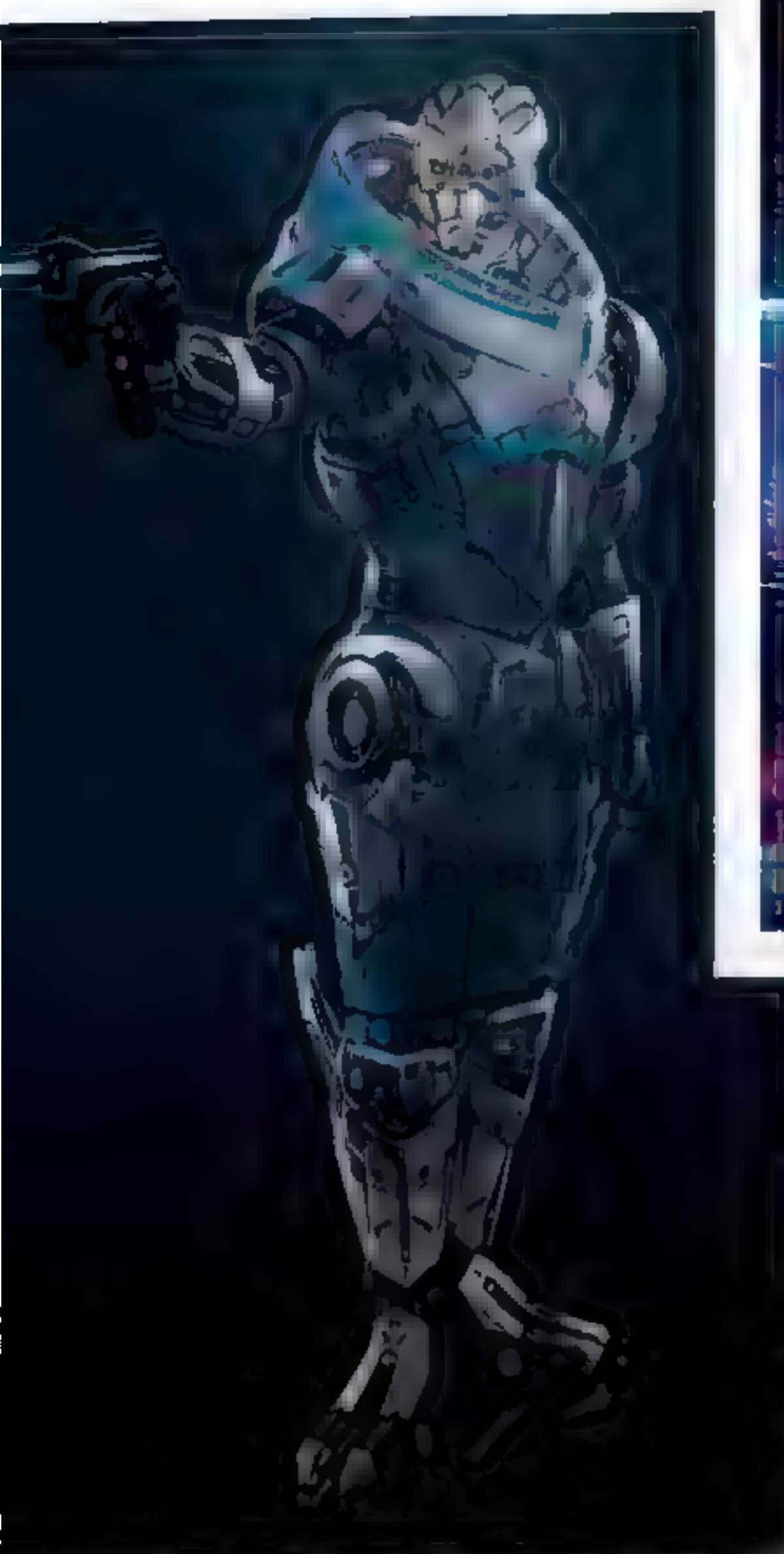
The tank shell now lives under Baldwin's desk, one of the weirdest desk toys in an office full of desk toys.

Sometimes he forgets it's there.

"He kind of passed this down to me, a bit of the passing of the torch, I guess," Baldwin says, smiling. "Either that or he didn't want to look at it anymore."







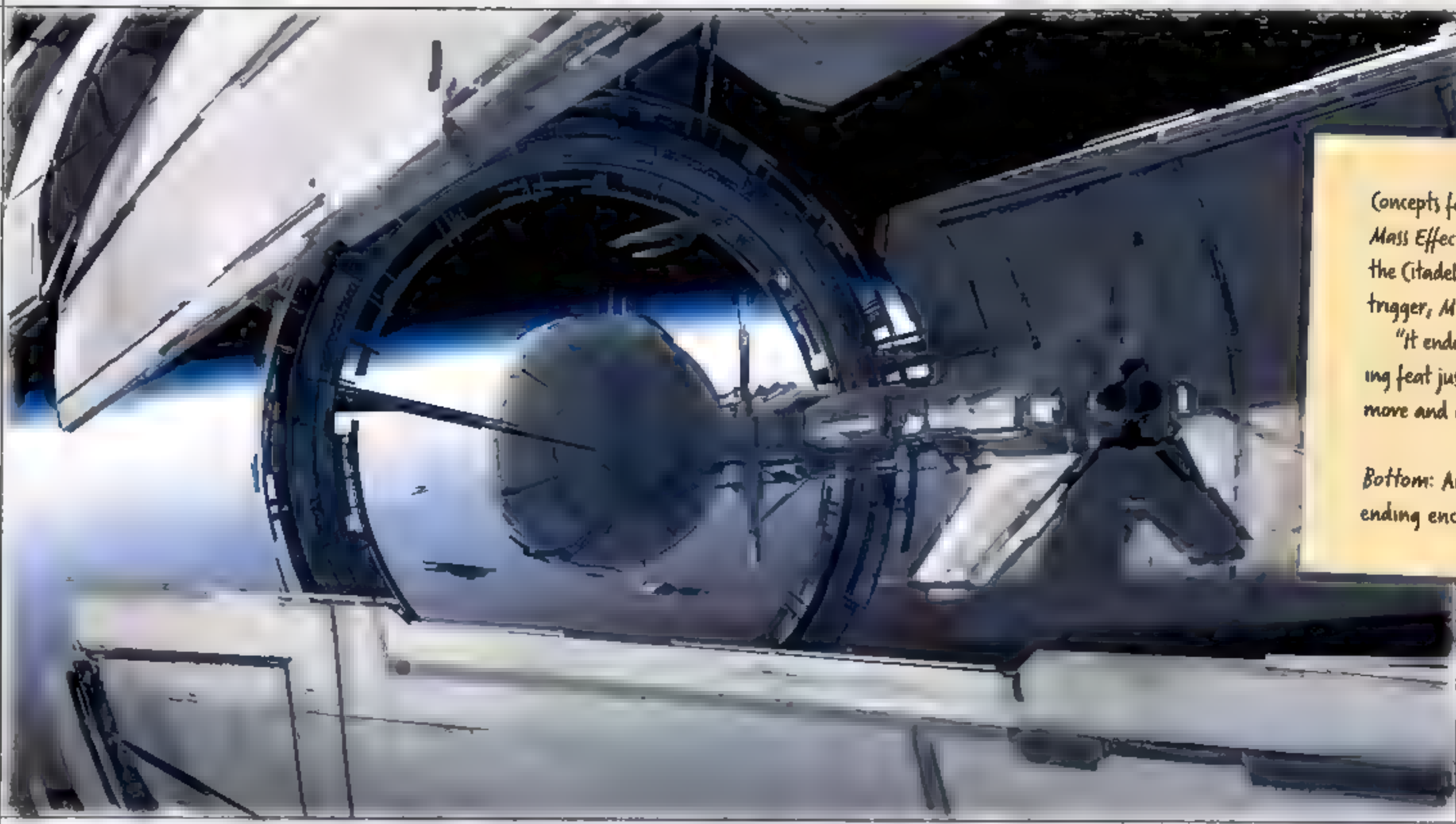
### BIO-TRIVIA

#### MULTIPLAYER CHARACTERS IN ME3 WERE VOICED BY POLICE, MILITARY PERSONNEL

Most of the multiplayer characters used on combat classes and species were created for *Mass Effect 3*'s multiplayer mode. To voice these characters, who are often referred to as "aliens," BioWare enlisted the voice talents of local police and military personnel trained to deliver authoritative commands.



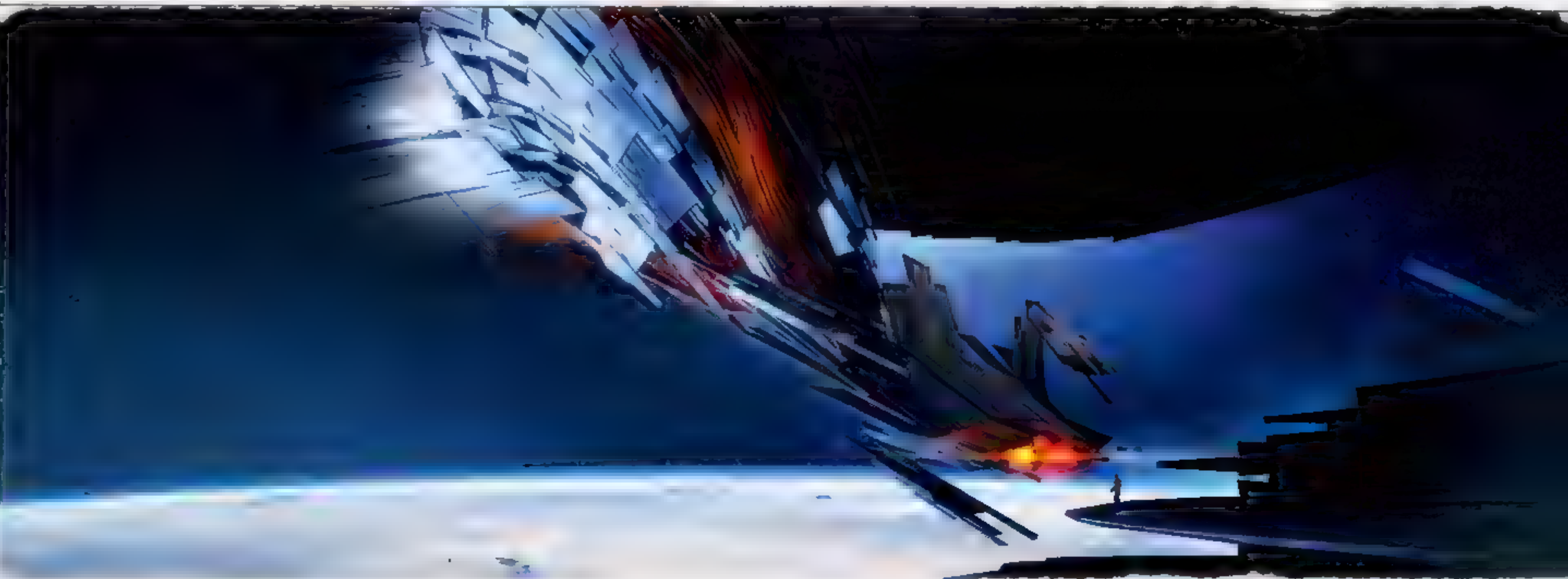
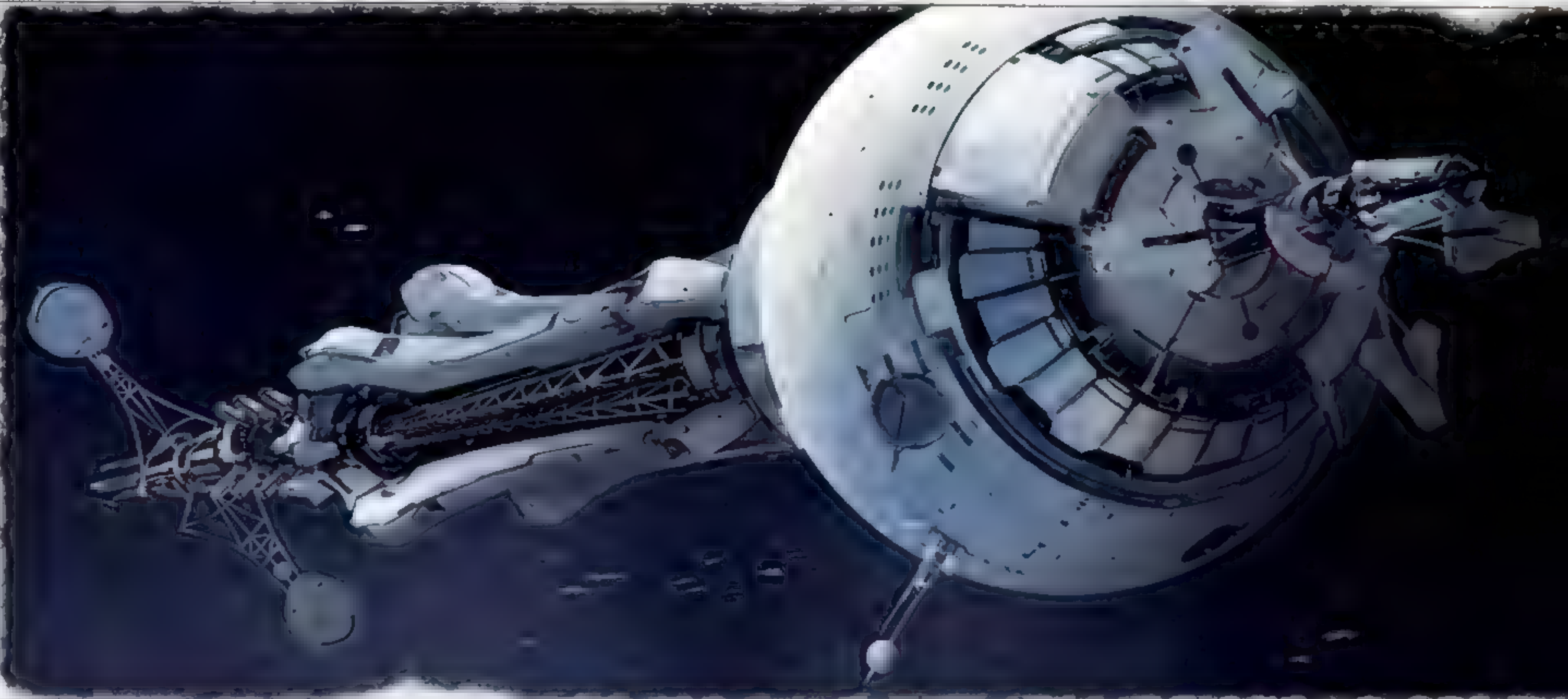




Concepts for the payload device at the end of *Mass Effect 3*. The device needed to attach to the Citadel while essentially serving as a giant trigger, *ME3* art director Derek Watts says.

"It ended up becoming quite the engineering feat just to visualize how this thing would move and connect to the Citadel."

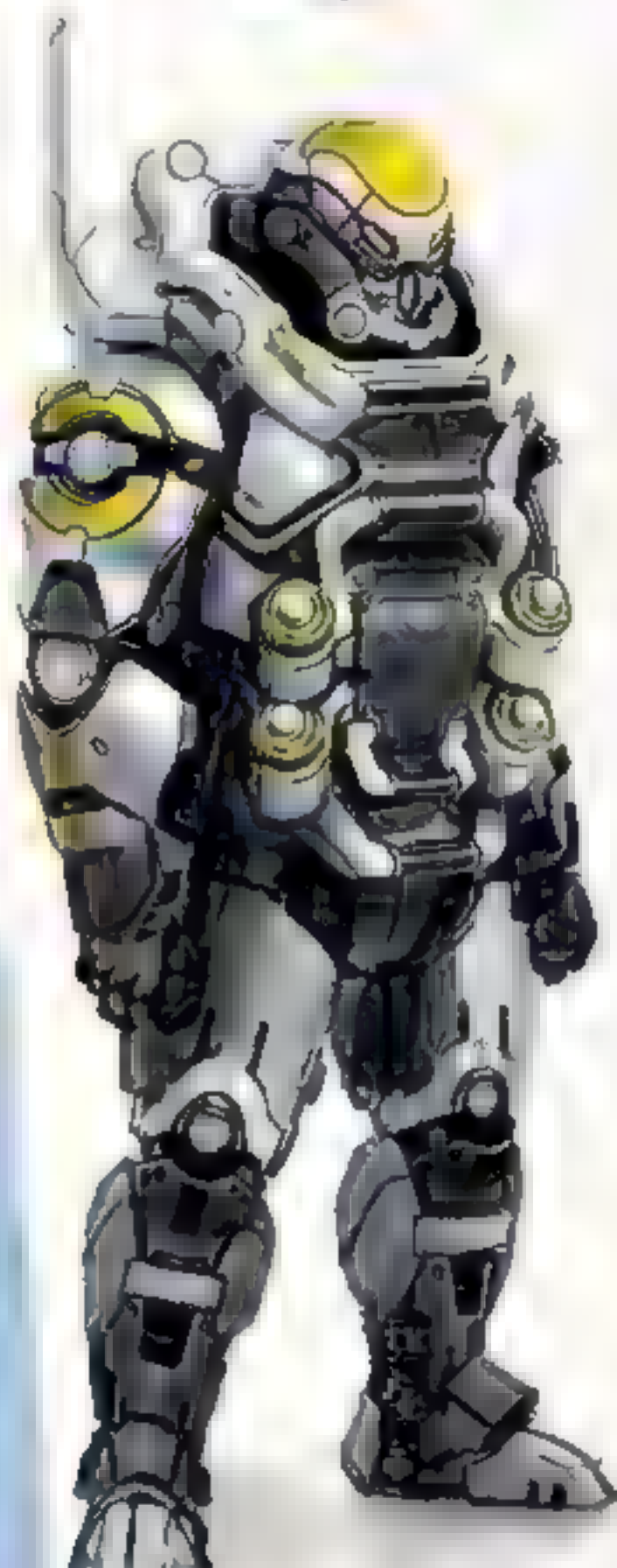
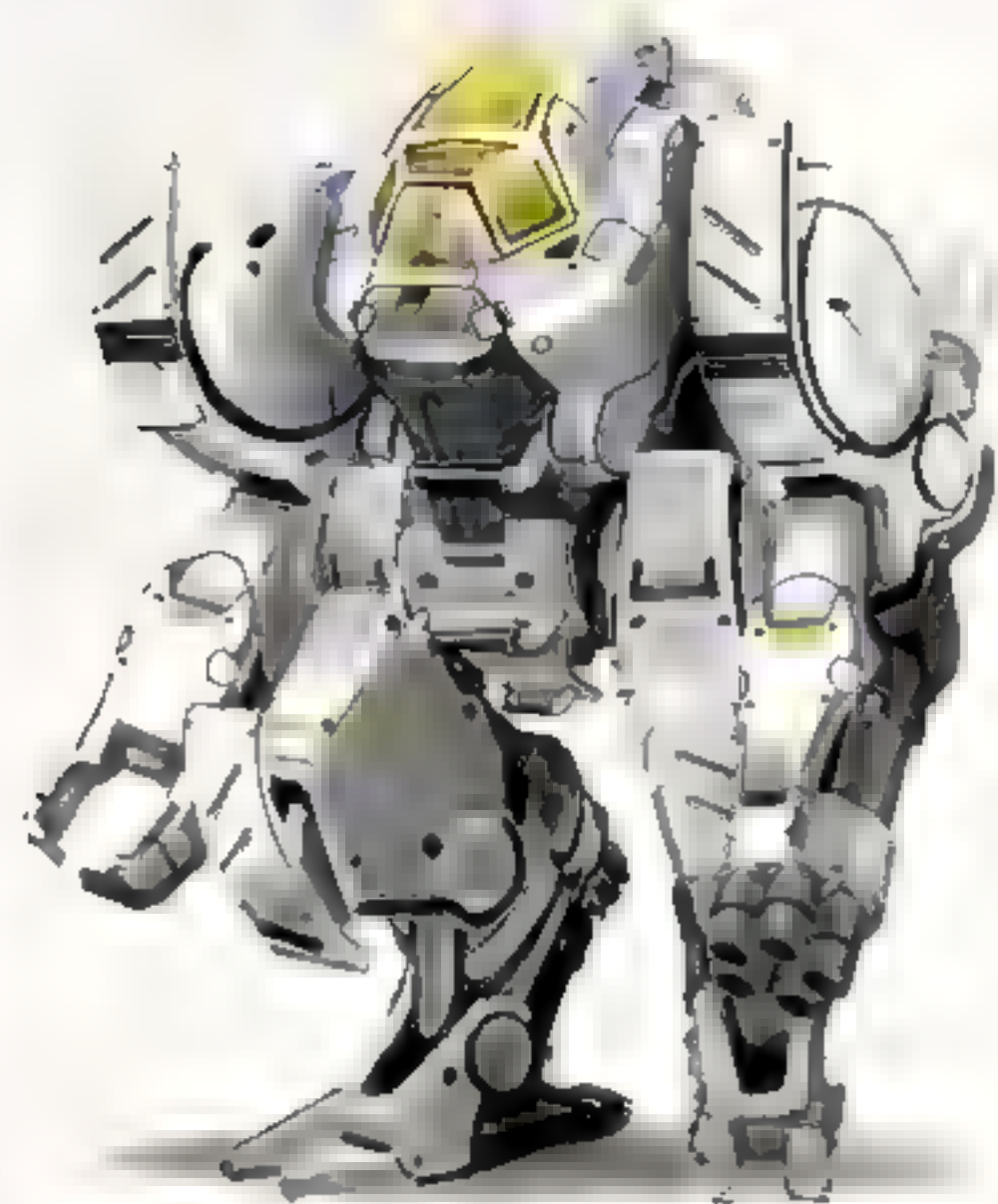
Bottom: An early concept of the game's ending encounter.



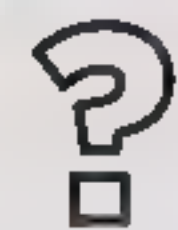
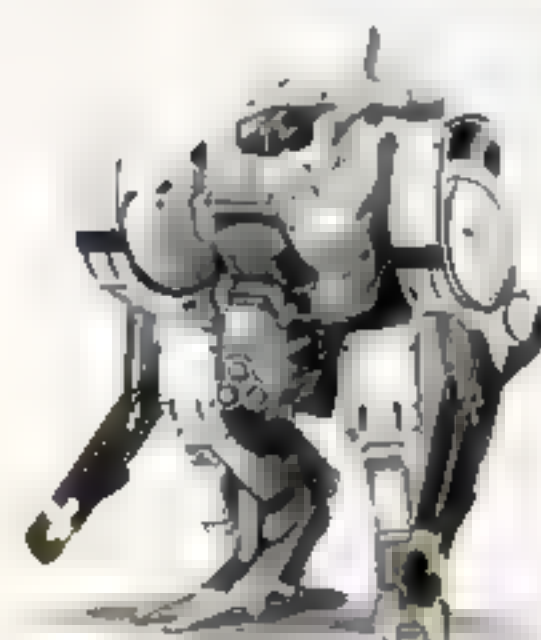
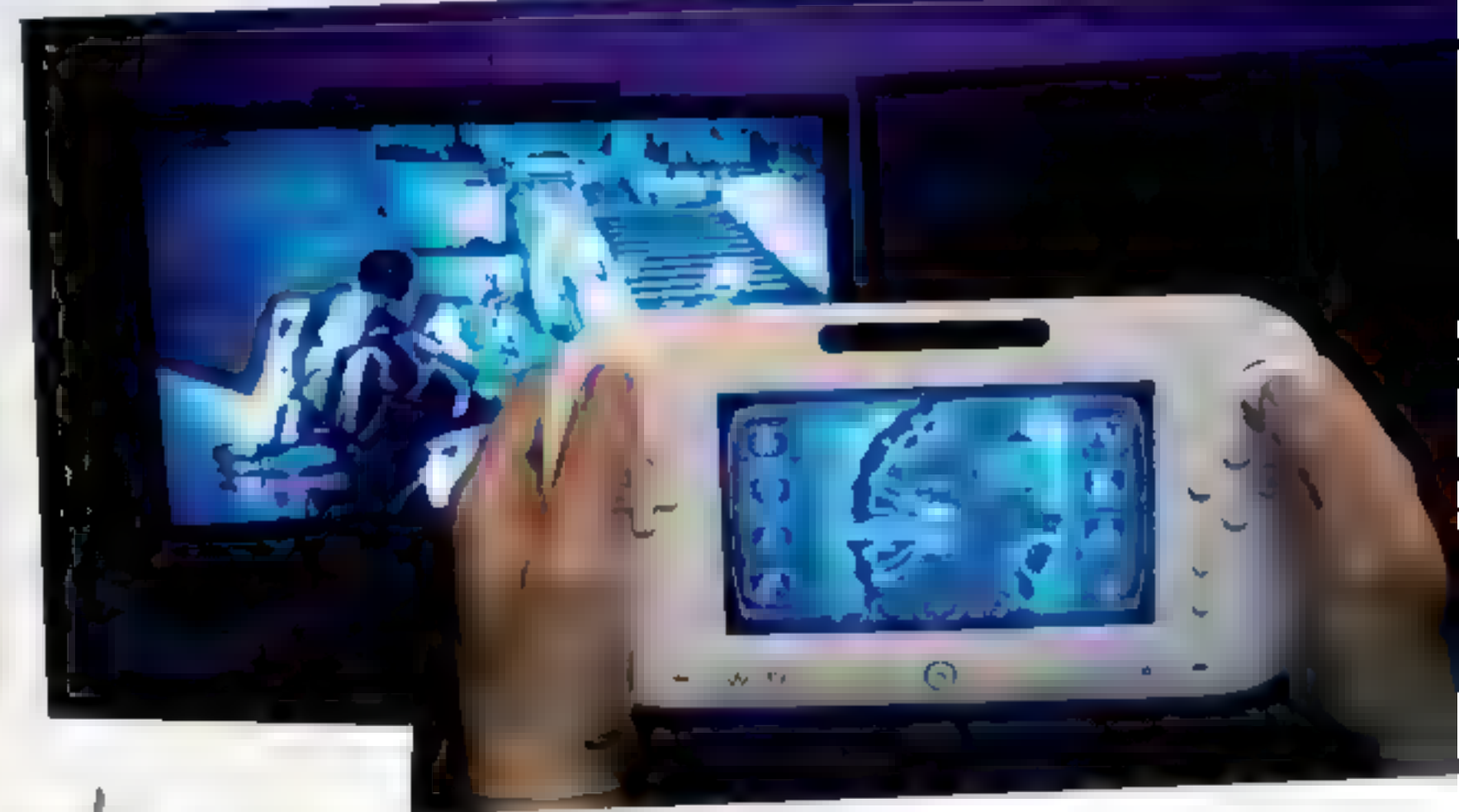








With the Illusive Man's turn toward proper villain and a new multiplayer mode, Cerberus became a full-fledged enemy faction in *Mass Effect 3*. Concept artists explored creating an antiteam, where Kai Leng was almost the anti-Shepard, with an elite squad to counteract your team (opposite page, bottom). The idea never went beyond the concept phase.

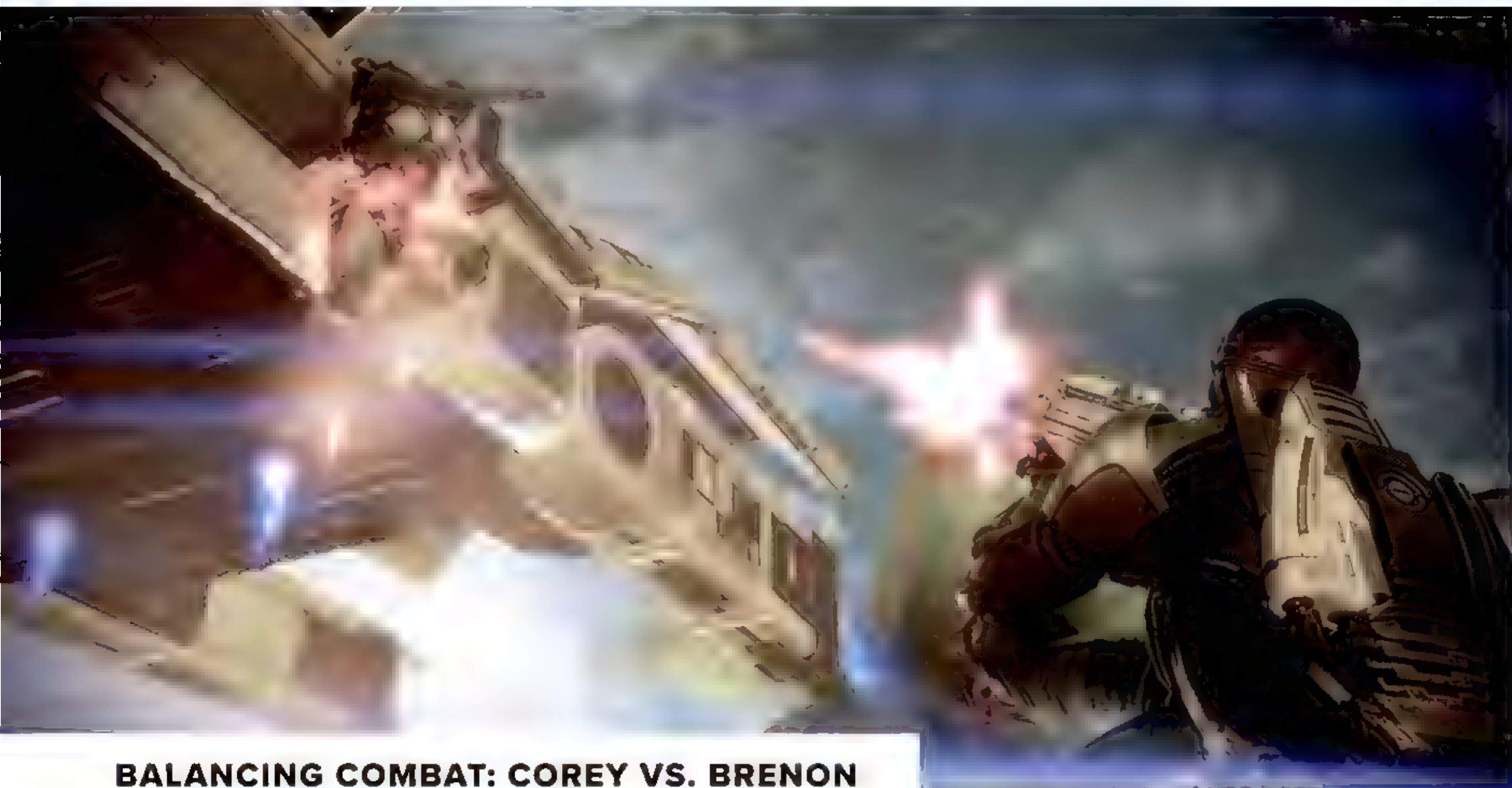


### BIO-TRIVIA

**MASS EFFECT 3 WAS RELEASED ON THE NINTENDO WII U**

For years, *Sonic Chronicles*, *The Dark Brotherhood*, and the honor of being the only EA game made for a Nintendo console. That was until *Mass Effect 3* *Special Edition*. Released on November 13, 2012, the Wii U-exclusive version of the game included *Genesis 2* (a sequel to the original interactive comic from *Mass Effect 2*) meant to catch up new or migrating players to unique gameplay features that took advantage of the console's touchscreen GamePad.





## BALANCING COMBAT: COREY VS. BRENON

HOW DESIGNERS IN *MASS EFFECT 3* ENTERED AN "ARMS RACE"

**BALANCE IS AN ESSENTIAL PART** of game design. In something with a lot of guns like *Mass Effect* or *Anthem*, if the player is overpowered, they may not feel challenged. Likewise, if enemies are too strong, the player's liable to get frustrated.

The solution is often finding a satisfying middle ground. But for *Mass Effect 3* designers Corey Gaspur and Brenon Holmes, it was war.

Brenon's job on *ME3* was to design the enemies, while Corey handled the weapons Shepard used to take those enemies down.

"He was obsessed with bigger, heavier guns," Brenon says. "We had this sort of informal competition where, like, he'd make this crazy, overtuned gun that would just murder all the enemies in the game, and then I tuned some stuff to bring up their health to compensate."

As development progressed, the guns just got more powerful, leaving Brenon to beef up his factions—and outright invent new ways to stop Corey.

This led to Phantoms: ninja-like Cerberus operatives wielding monomolecular blades. Corey had in turn designed consumable rockets that could wipe out entire waves of enemies. Corey must've figured a rocket would make short work of Brenon's space ninjas. Brenon had other plans.

"Corey was playing multiplayer, and I was watching as he shot a rocket at a Phantom," Brenon recalls. "I had just added the ability for her to cut rockets. She cut the rocket in half . . .

"Corey just turns and looks at me and is like: 'Really, dude? I just shot a rocket at this Phantom and she's fine? Not even damaged? Zero damage?'"

"It was the arms race," gameplay designer Baldwin Li says. "Bullshit creatures and then bullshit guns. And then bullshit creatures and bullshit guns."

Baldwin and Brenon say this friendly rivalry helped elevate *Mass Effect 3*'s gameplay. Corey had a real knack for making a gun feel so good to

fire it had his fellow designers scrambling to keep up. It was his version of balancing.

Before Corey passed away during *Anthem*'s development, he mentored Baldwin in all things weapon design. And the arms race continued. Baldwin remembers one *ME3* gun that Corey designed—the Arc Pistol—that was causing problems for enemies. It was just too powerful—and the pistol seemed hell bent on staying that way. Baldwin would tune down all the gun's stats, and it still did basically three times the damage it should have been doing.

"I was like, what the hell? And then I looked closer," Baldwin says. "It secretly fired three bullets for every pull of the trigger!"

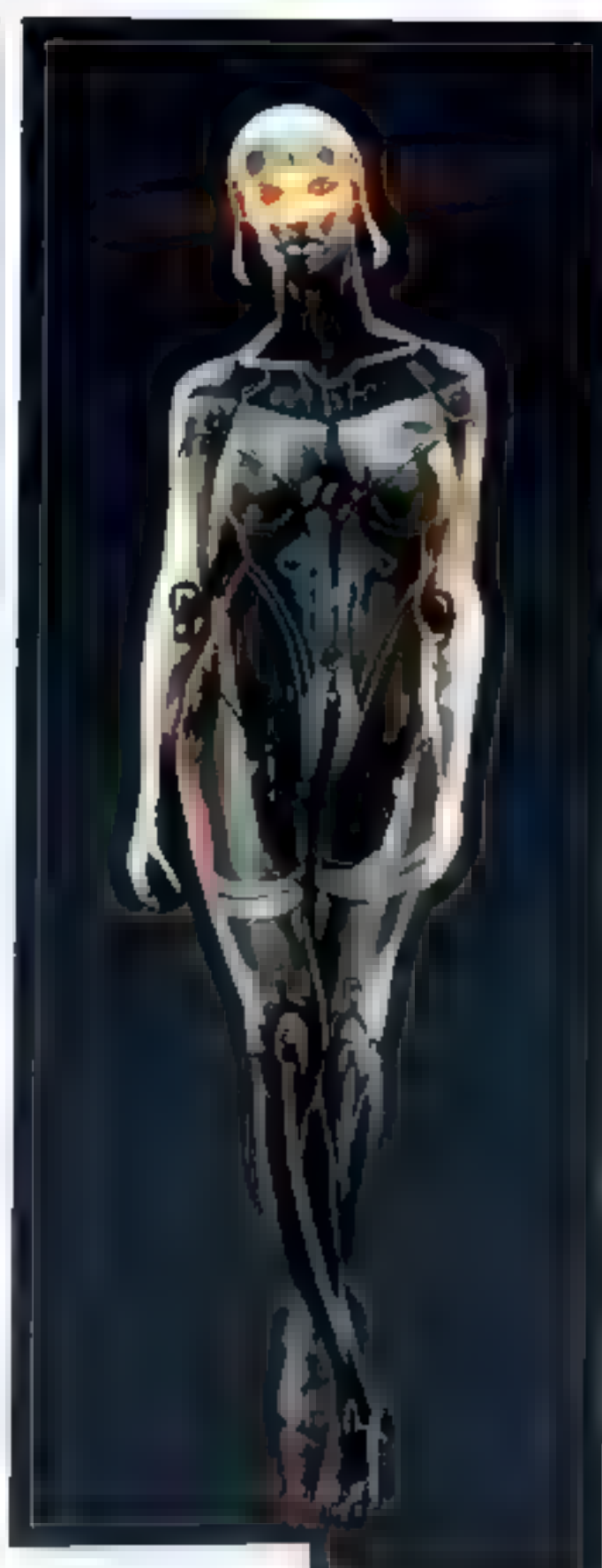
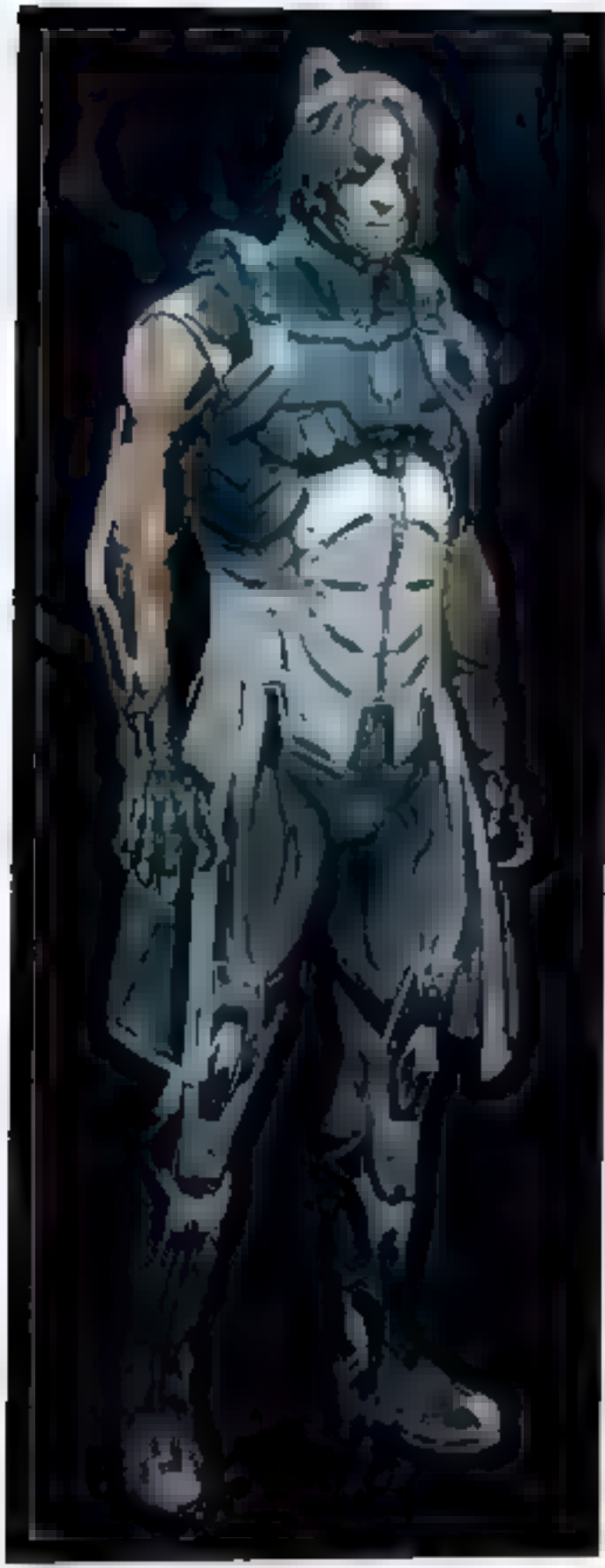
Baldwin laughs: "Corey, you sneaky jerk."



Longtime *Mass Effect* gameplay designer Corey Gaspur passed away during the development of 2019's *Anthem*. The game is dedicated to his memory, along with the memory of BioWare Austin technical designer Nathan Mayes.



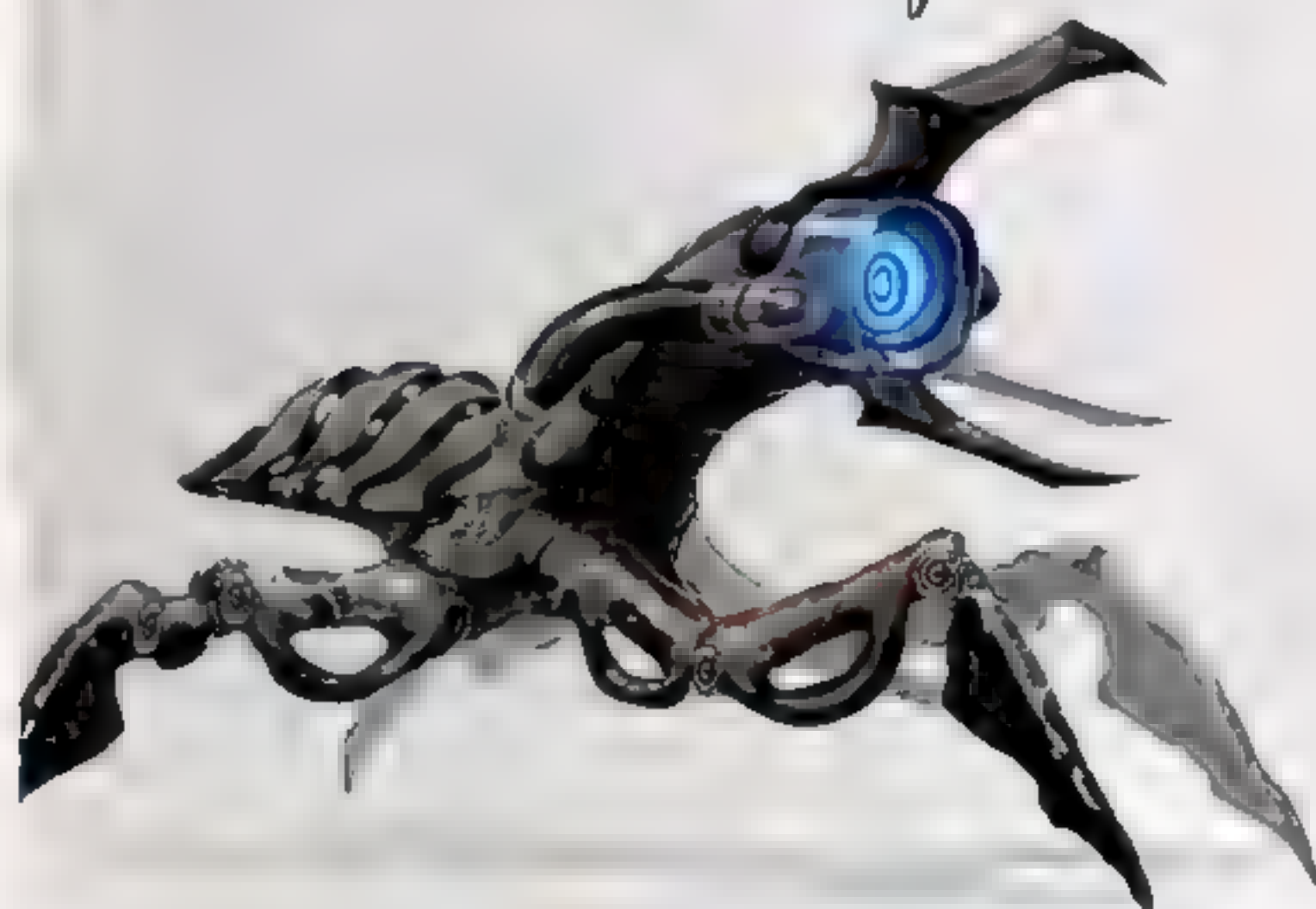
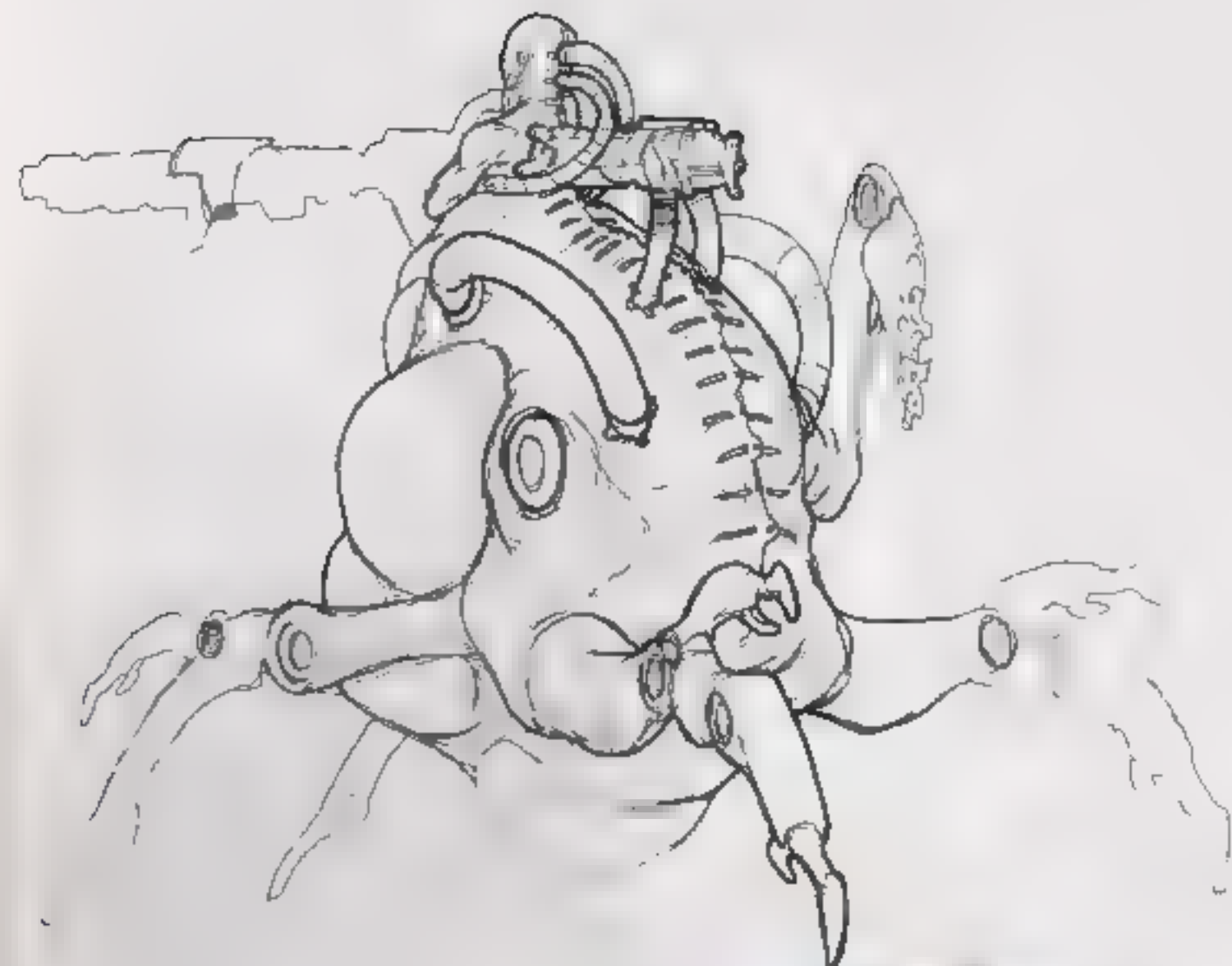
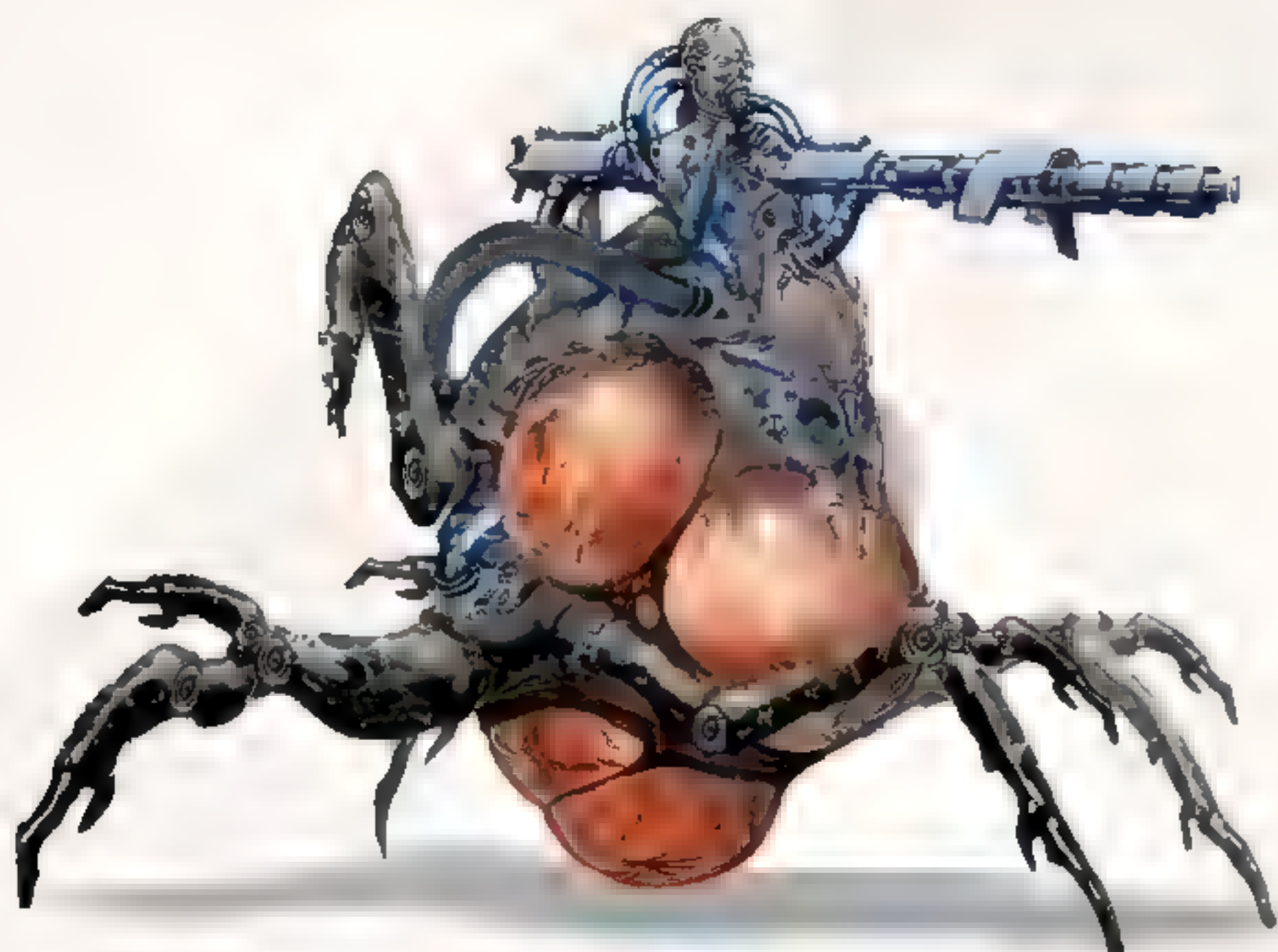




A collection of character and armor concepts for *Mass Effect 3*. The helmet on the character to the right was initially designed for *Revolver*.







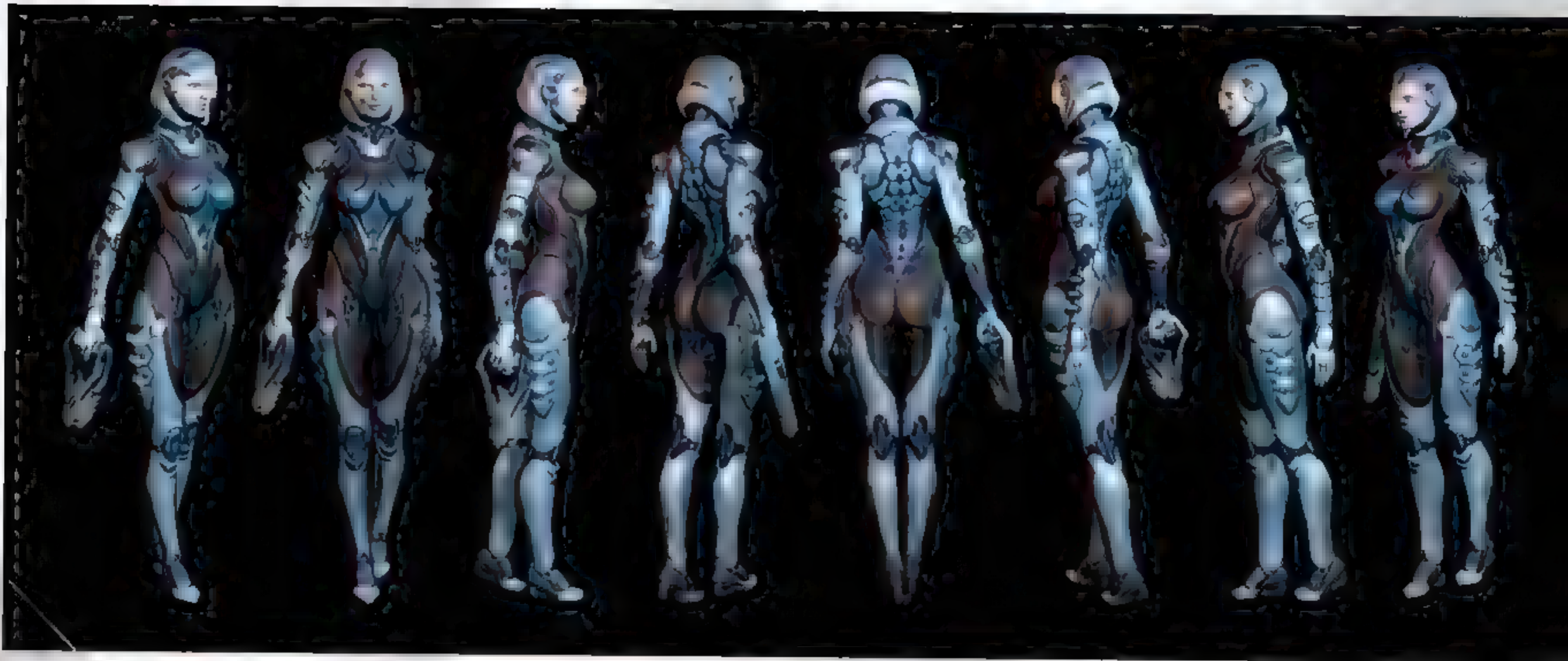
### BIO-TRIVIA THE KAKLIOSAUR BEGAN LIFE AS A DESK TOY MASH-UP

Ancient krogan war mounts known as kakliosaur made an appearance by way of a fossilized skull sought by a scientist in *Mass Effect 3: Citadel*. But the lizard war beasts actually began their life as an in-joke on the writers' room after *ME3* writer John Dombrow placed a Gunt figure on the back of a twelve-inch tyrannosaurus toy he had on his desk. Lore was brainstormed to justify the toy mash-up before someone asked: Why don't we put it in the game?

The writers and editors loved the kakliosaur so much that *ME3* editor Karin Weekes had custom cotton mugs made.





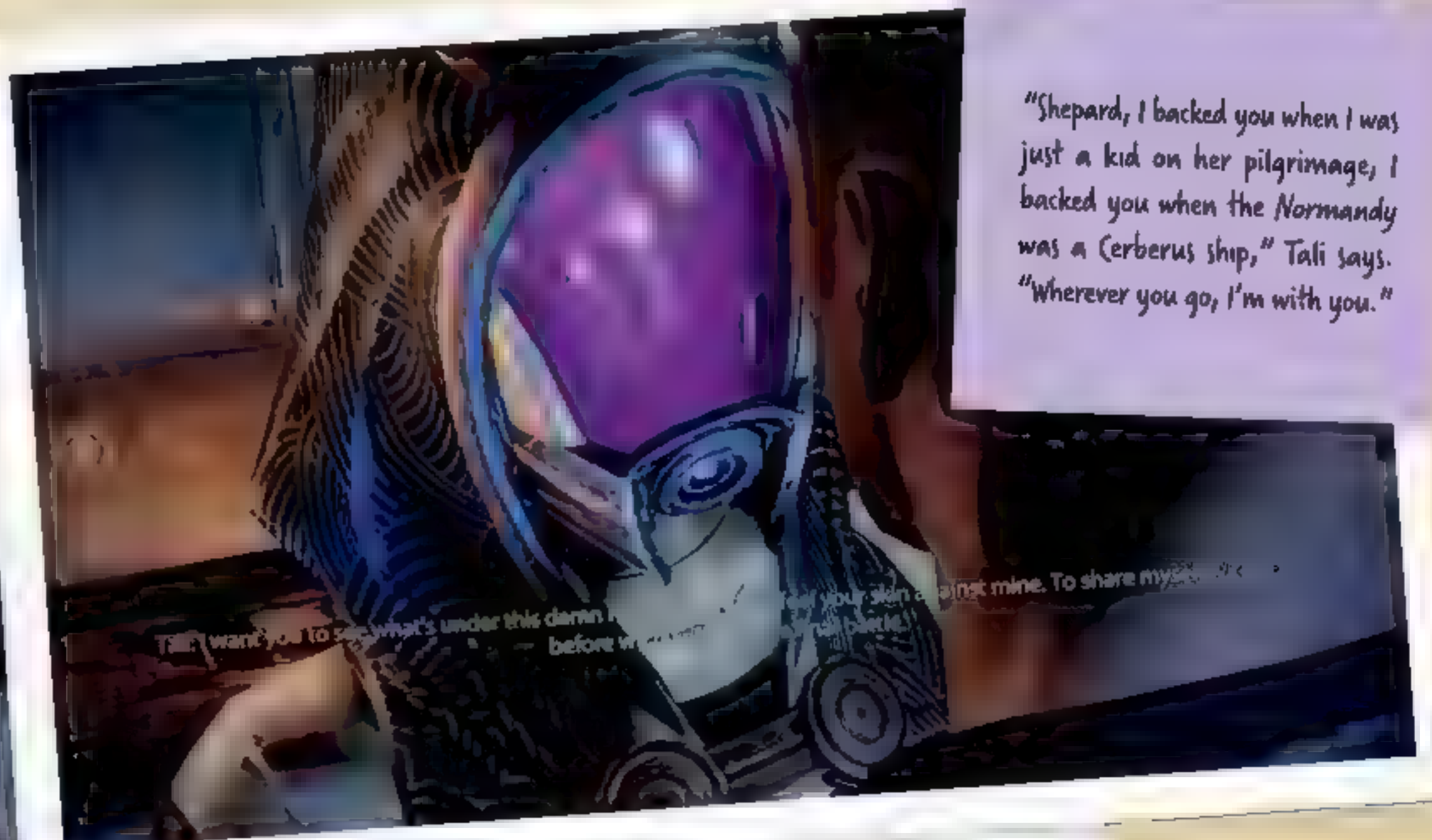


**BUG REPORT:**  
**ROMANCE IS DEAD**

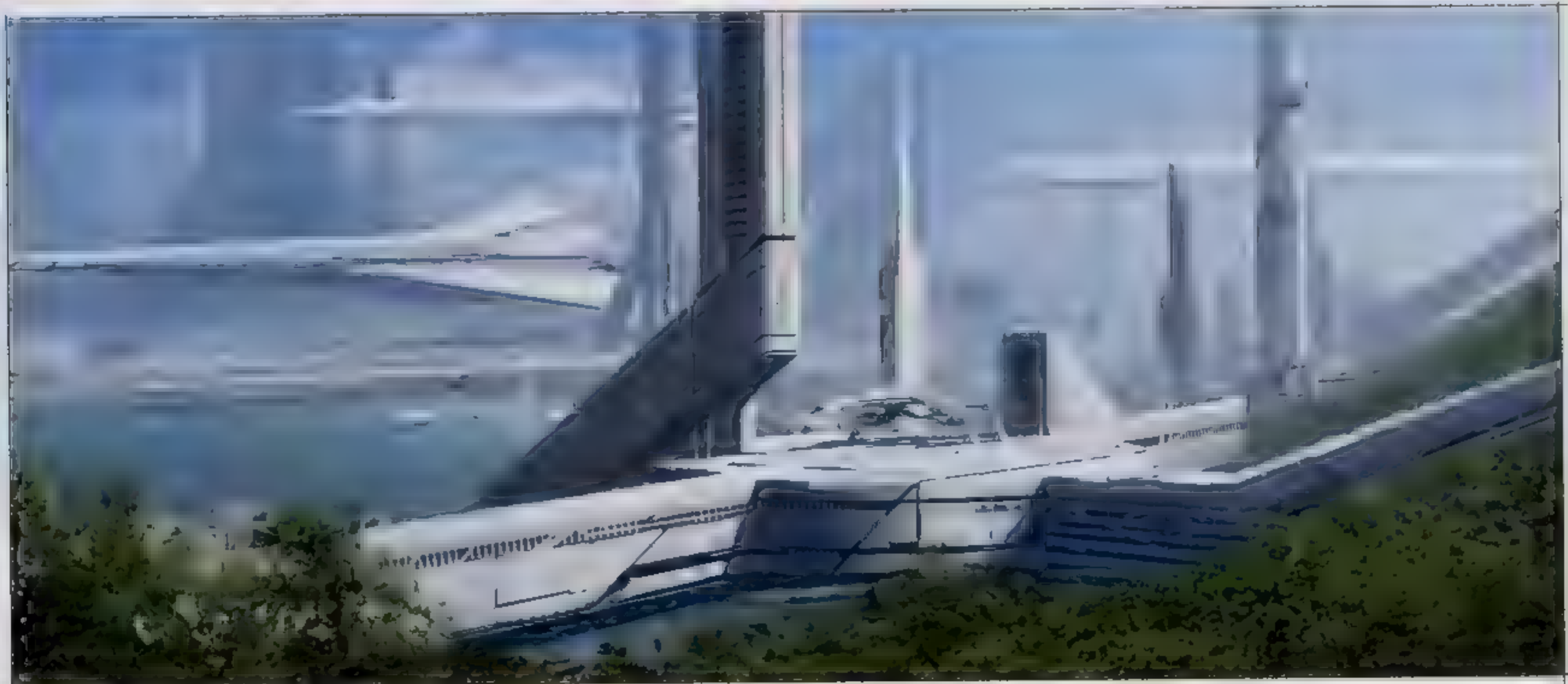
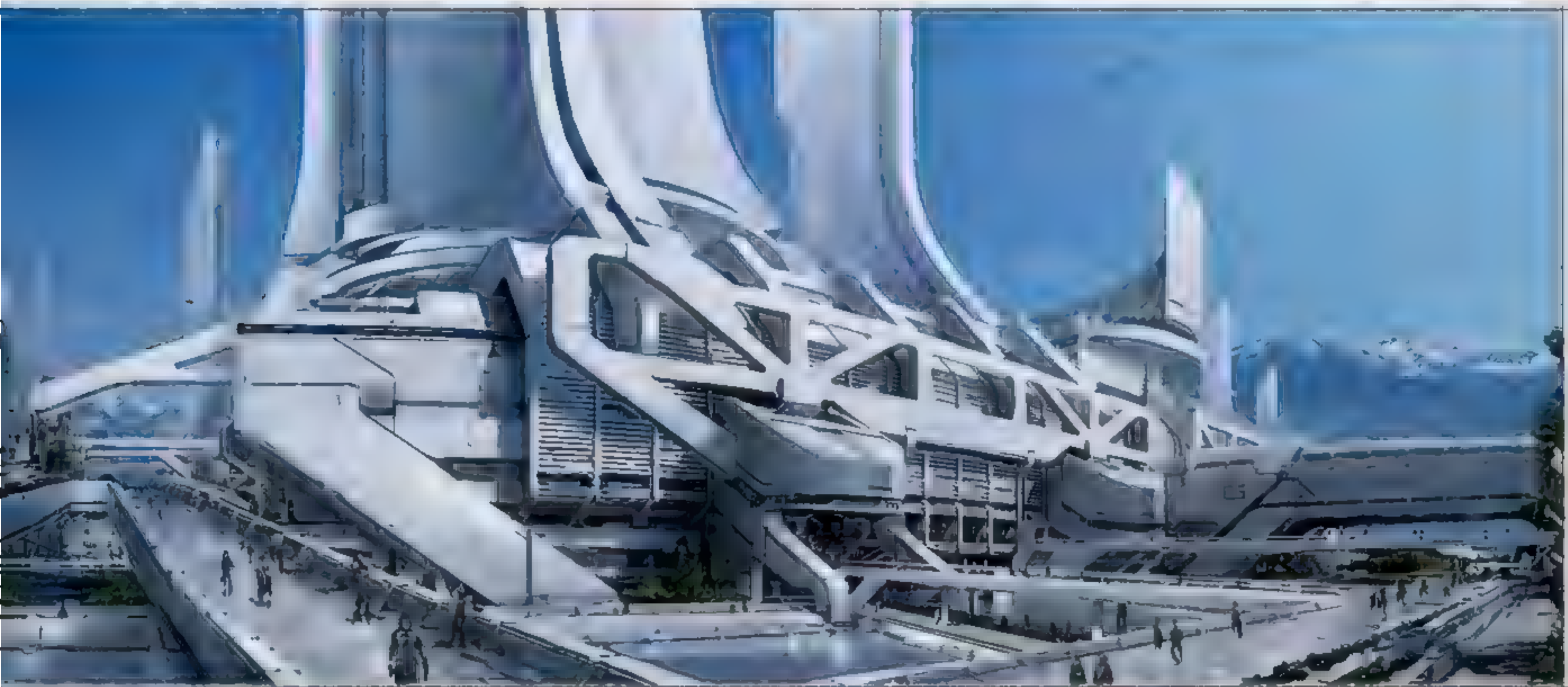
**Release:** *Mass Effect 3*

**Priority:** 1 (Severe)

**Description:** Tali and Shepard slept together in *Mass Effect 3*. It was a nice moment. The problem: the scene was firing after she's supposed to be dead. This particular play-through of *Mass Effect 3* had Shepard siding with the geth.











TRUE TALES  
OF BIOWARE:  
**"IT'S OKAY. I'M  
JUST KILLING MY  
BEST FRIEND."**

**ONE OF ANTHEM ASSOCIATE PRODUCER** Jennifer Cheverie's fondest memories working on *Mass Effect 3* had her crying at her desk. It was Jen's first year at BioWare and she was working as a content tester. The bulk of the job was running passes through levels and filing bugs for their designers.

One day, her manager assigned her a different task: test a series of cinematics featuring Mordin. Jen was excited. Mordin was her favorite character in the series. Then she looked at the test instructions. Among the scenes she would be testing was his death—specifically, the Renegade version of the scene.

*This is even before, like, all the audio and everything was in, so you don't have the sad music or*

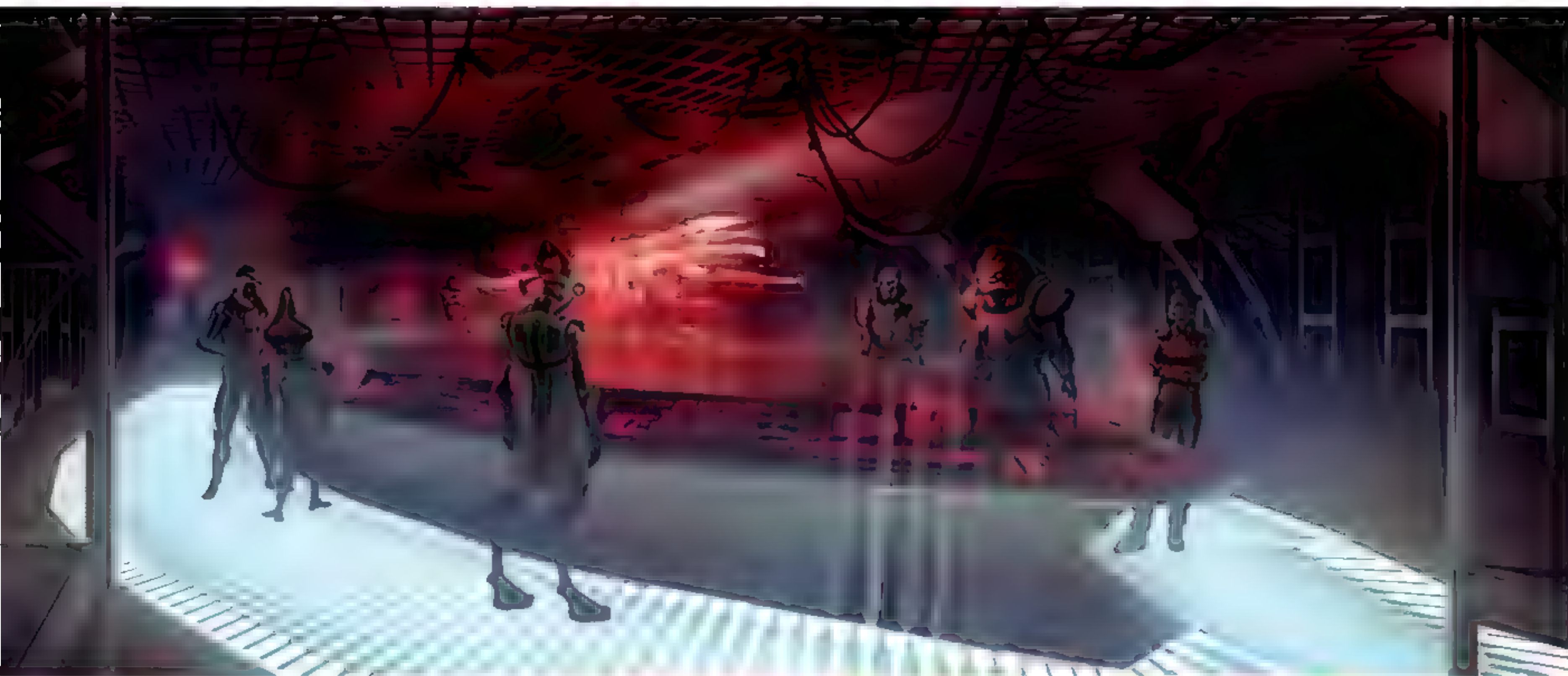
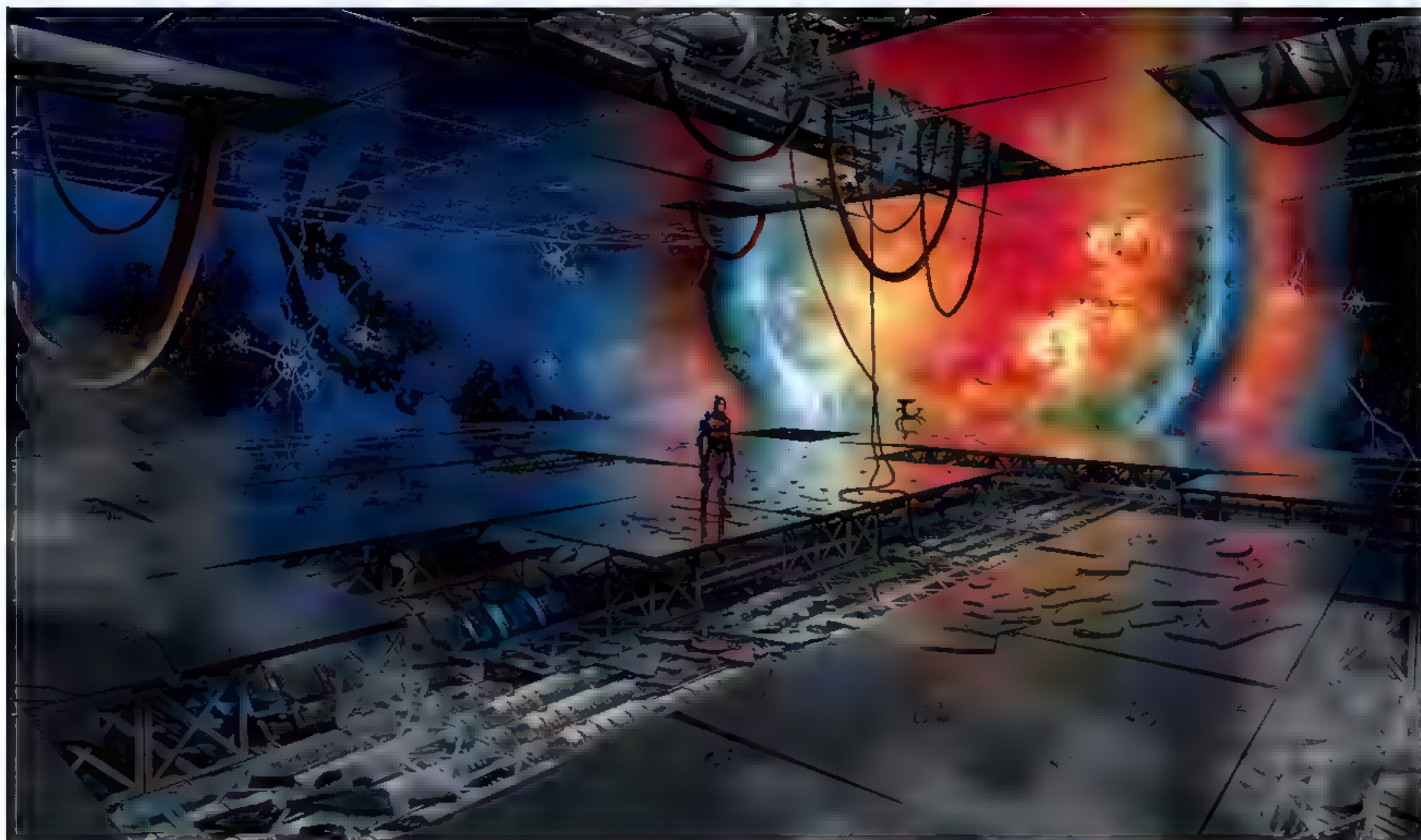
*anything like that playing in the background. I remember sitting at my desk and my hands just went to my face because there's that moment where you hit the Renegade trigger and then Shepard pulls a gun on him as he's walking away. And it's the Carnifex: the gun he gives you from Mass Effect 2.*

*I burst into tears. And I was crying for the rest of that day.*

*Where else am I going to have a job where I'm sobbing at my desk and everything's fine? People are waving to me as they walk by and I'm like, "It's okay. I'm just killing my best friend."*







Top Taking a moment from *Mass Effect 2* and seeing the state of disaster. The artist's vision of the *Mass Effect 2* hangar.

Mdax B for the concept team had the story of the game to work toward. They explored ideas of their own, including a hangar of their own, and back the *Normandy* to go after the Reapers.

Bottom Chaos







With the exception of Shepard's visions and in mummified form in *Mass Effect*, Protheans were not seen until *Mass Effect 3*. Concept artists had free rein to design an alien that read as ancient while still fitting in *Mass Effect's* universe.





## SHEPARD'S STORY ENDS

**MASS EFFECT 3** MARKED the end of Shepard's story, one that took a trilogy to tell, with players exercising unprecedented agency over the way it played out. Wrapping up the story was a massive feat. In a way, the entirety of *Mass Effect 3* is an ending. But for many players, the real end of the game came down to its final moments, their last with a character they'd been with from that first tense distress call from Eden Prime.

And while the critical reception for the game was extremely positive, many fans were unsatisfied with the ending, which became one of the most controversial in the history of games.

"There's a whole bunch of things that came together to make it incredibly intense and emotional for players. I think the biggest one was the sense of finality, that whatever it was that happened in that very last moment . . . was it," project director Casey Hudson says.

"We were, on the one hand, at the end of a marathon trying to finish the game and the series. But as developers we also knew that there would be more. We knew that we would continue to tell the story. In retrospect, we didn't fully appreciate the tremendous sense of finality that it would have for people."

For *Mass Effect 3*, Casey envisioned an ending that posed new questions, something in the tradition of high sci-fi that left players dreaming about what their particular galaxy's future could hold.

"Frankly, there's a lot more that we could have and should have done to honor the work players put in, to give them a stronger sense of final reward and closure," Casey says.

AAA games are massive undertakings with a million moving parts. Somehow, they come together, but even the best-planned projects don't turn out quite like the developers hope. From beginning to end, video game production is a series of compromises. It's rare, if not impossible, for developers to ship a game they are entirely happy with.

"I think people imagine that when you finish a game, it's exactly the way that you wanted it to be. But whether people end up loving or hating the final result, we work hard to finish it the best we can, knowing that there's a lot that we would have wanted to do better. I think that's true of any creative work."

As the dust settled after the initial reaction to the ending and later its epilogue, meant to show the wide-reaching ripple effects of Shepard's final choice, players emerged mostly asking for one thing.

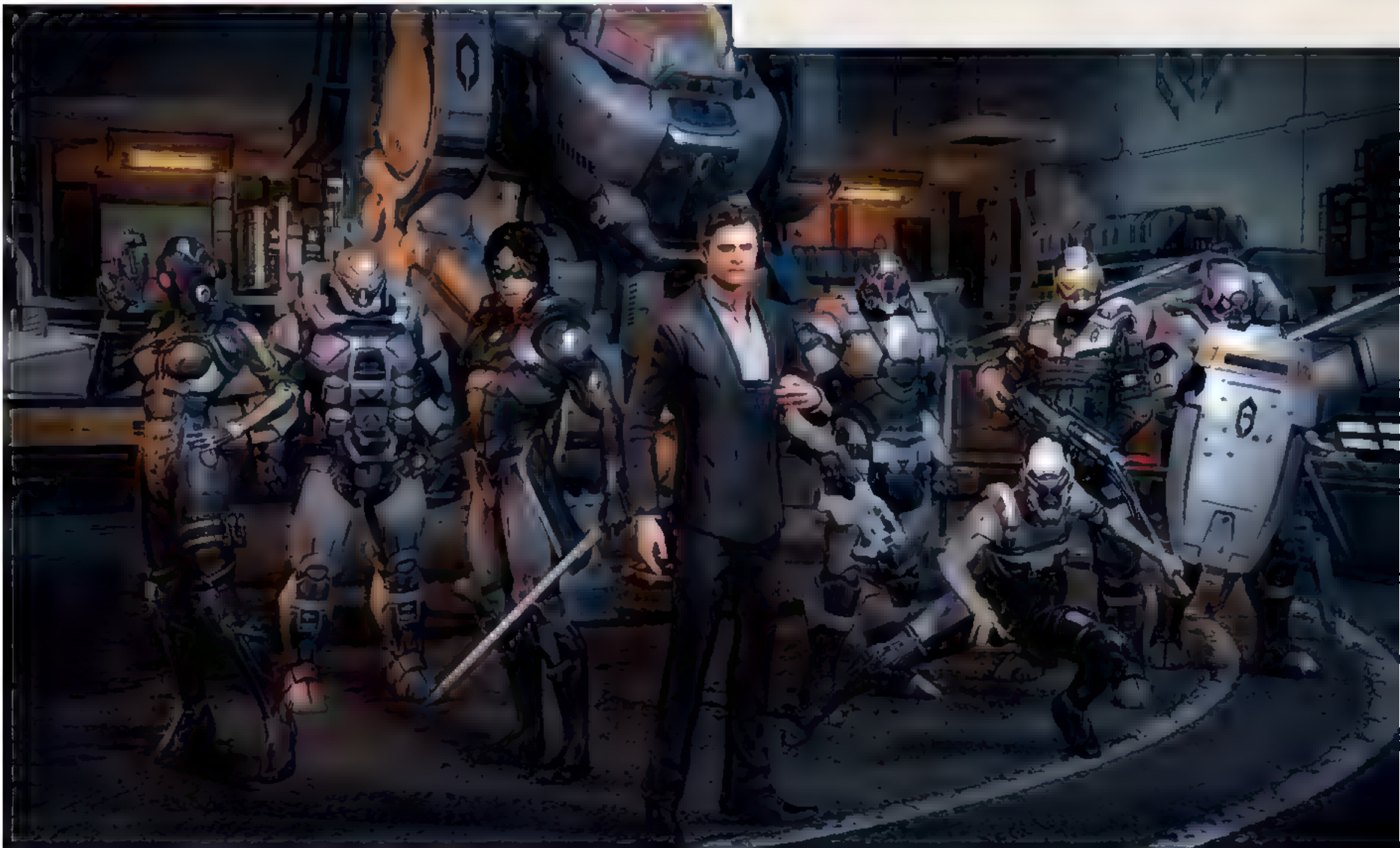
"Now, most of what we hear, after both *Mass Effect 3* and *Andromeda*, is: 'Hey, just go make more *Mass Effect*.' And that to me is the most important thing," Casey says. "Knowing that players want to return to the *Mass Effect* universe is what inspires us to press on and imagine what comes next."

**"THERE'S A WHOLE BUNCH OF THINGS THAT CAME TOGETHER TO MAKE IT INCREDIBLY INTENSE AND EMOTIONAL FOR PLAYERS. I THINK THE BIGGEST ONE WAS THE SENSE OF FINALITY, THAT WHATEVER IT WAS THAT HAPPENED IN THAT VERY LAST MOMENT . . . WAS IT."**

—PROJECT DIRECTOR  
CASEY HUDSON







## REAL TALES OF DEVELOPMENT:

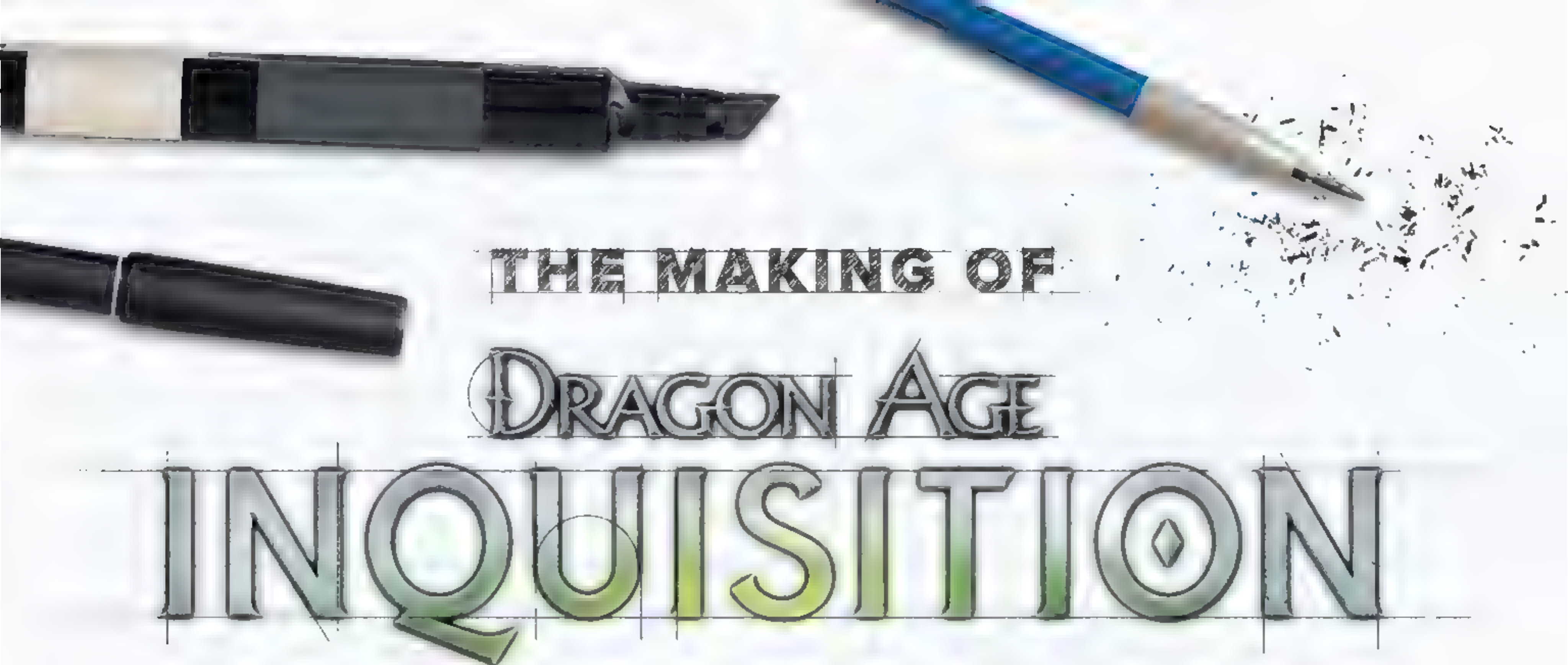
### **MASS EFFECT 3'S MIDNIGHT LAUNCH**

**THE DAY MASS EFFECT 3 LAUNCHED**, there were midnight launch parties across North America, including a huge one in Southgate Centre near the Terrace Office Tower. Numerous developers, including Mac Walters and writer Sylvia Feketekuty, sat at long tables, signing autographs and greeting hundreds of fans as they reached the front of the line to receive their preordered copy of the game.

When midnight struck, the line was long enough that it took several hours for everyone to get their games. Sylvia remembers one fan in particular:

*It was three a.m. Some guy who drove up from Calgary with his friends. He was, like, one of the last people in line. I think he was sort of tired-drunk. He threw himself across the signing tables, pulled up his shirt, said: "Guys, sign my abs!" And, like, I did it, because he waited so long. It felt impolite not to. So I hope he enjoyed his copy of Mass Effect 3.*





## THE RISE OF THE INQUISITOR



### KEY FACTS DRAGON AGE: INQUISITION

#### RELEASE DATE

November 18, 2014

#### GENRE:

RPG

#### PLATFORMS:

Xbox 360, Xbox One,  
PlayStation 3, PlayStation 4,  
Windows

#### SELECTED EXPANSION CONTENT:

*Jaws of Hakkon*, *The Descent*,  
*Trespasser*

Developed in Edmonton and  
Austin (*The Descent* DLC)  
Published by Electronic Arts

**DRAGON AGE: INQUISITION** WAS A sweeping, ambitious third installment to the *Dragon Age* series that spanned dozens of exotic locales across Ferelden and Orlais, stretching from the desolate Western Approach to the intoxicating Hinterlands and even deathly Nevarra to the north. The game world further expanded with the inclusion of a war table, where the Inquisitor and their inner circle could exercise influence over the farthest reaches of the continent.

*Inquisition* aimed to be bigger than *Dragon Age II* and even *Origins* in every conceivable way—with roughly half of *Origins*' development time. It had epic, multitarget dragon battles. Multiplayer. Reactivity based on key decisions from the previous games. Like *Origins*, it allowed players to customize not only their character's appearance but also their race, adding Qunari to the human, elf, and dwarf options. All this while releasing on both current and last-generation consoles and using EA's Frostbite engine, a first for BioWare.

The result gave players more of Thedas than they'd ever seen. Developers packed new creatures, characters, and systems into every corner of the game.

"We make these giant, crazy things," *Inquisition* writer Luke Kristjanson says, "and we kind of rely on everybody making their part so that they all kind of fit together at the end."

#### THE RISE OF THE INQUISITION

The first hour of *Inquisition* had to do a lot of heavy lifting, tying together the events of *Origins* and *Dragon Age II* while introducing a new protagonist and even a couple of followers in the aftermath of a magical attack at a peace conference that kills the Divine, leader of the Chantry.

"The prologue in *Dragon Age: Inquisition* I rewrote seven times," lead writer David Gaider says. Then Luke did two more passes.

Players took the role of the Inquisitor, though at the start they were not so much an Inquisitor as a prisoner of Leliana and Cassandra, returning characters who suspected the player of orchestrating the attack on the Divine.

The beginning and ending of a game often suffer the most revisions, as feedback runs as close to launch as anyone dares.

"Our problem is always that our endings are so important, but we leave them to last, when we have no time. So they never get the polish that they need," David says. "I kept pushing on *Inquisition*: Can we work on the ending now? Can we work on the ending now? Can we do it early on? Because I knew exactly what it was going to be. But despite the fact that it kept getting scheduled, whenever the schedule started falling behind, it kept getting pushed . . . so, of course, it got left to last again."

The ending to the game, though, was arguably not the encounter with Corypheus, but the reveal of the story's real antagonist, Solas, a follower until the end, when he betrayed the player. Solas's story continued in the game's *Trespasser* DLC and remains a main thread in *Inquisition*'s long-awaited follow-up.

#### THE WRITER'S ROOM PROCESS

*Inquisition* had eight full-time writers and four editors over the course of its development, with other writers joining the project to help wrangle what ended up being close to a million words of dialogue and unspoken text. While many teams moved to a more open-concept style of work for *Inquisition*, the writers remained tucked away in their own room—a choice that David says was necessary, given how much they talked.

"They figured that we would just disturb everybody. And that's great. I always liked to further the perception that we would just bother everyone, because we didn't really want to be in the big rooms," David says. But all that talking had a purpose. If someone hit a bump or a wall in their writing, they would often open the problem up to the room.

"I'd just sort of spin my chair around and say: 'Hey, folks,' and everybody turned around," David says.

He'd lay out the problem. "Then we'd spend at least half an hour with all the joke answers, because people would say silly things. Sometimes those





joke answers actually led to the solution. Everyone's laughing. Then they'd say: 'But could we do that?'

As writing on a project like *Inquisition* progresses, the writers grow punchier, and weirder things make it in the game. This is especially the case toward the end of a project. When all the big plots and character arcs are squared away and in the hands of downstream teams, the writers move on to things that require less buy-in from other designers, such as follower banter and codex entries.

David says he likes to leave banter—the running conversations between present party members—for last, in part because it's fun. "It's something we dangle like a carrot stick, basically. If we get through all this plot stuff, we can write banter," he says.

Banter begins as lists of topics for two followers to discuss. These topics may progress over time or be one-off exchanges. Often they will speak to specific situations the followers may encounter, like areas of the game or events in the plot. Other exchanges have to fit anywhere in the game at any point. One banter script can balloon to well over ten thousand words.

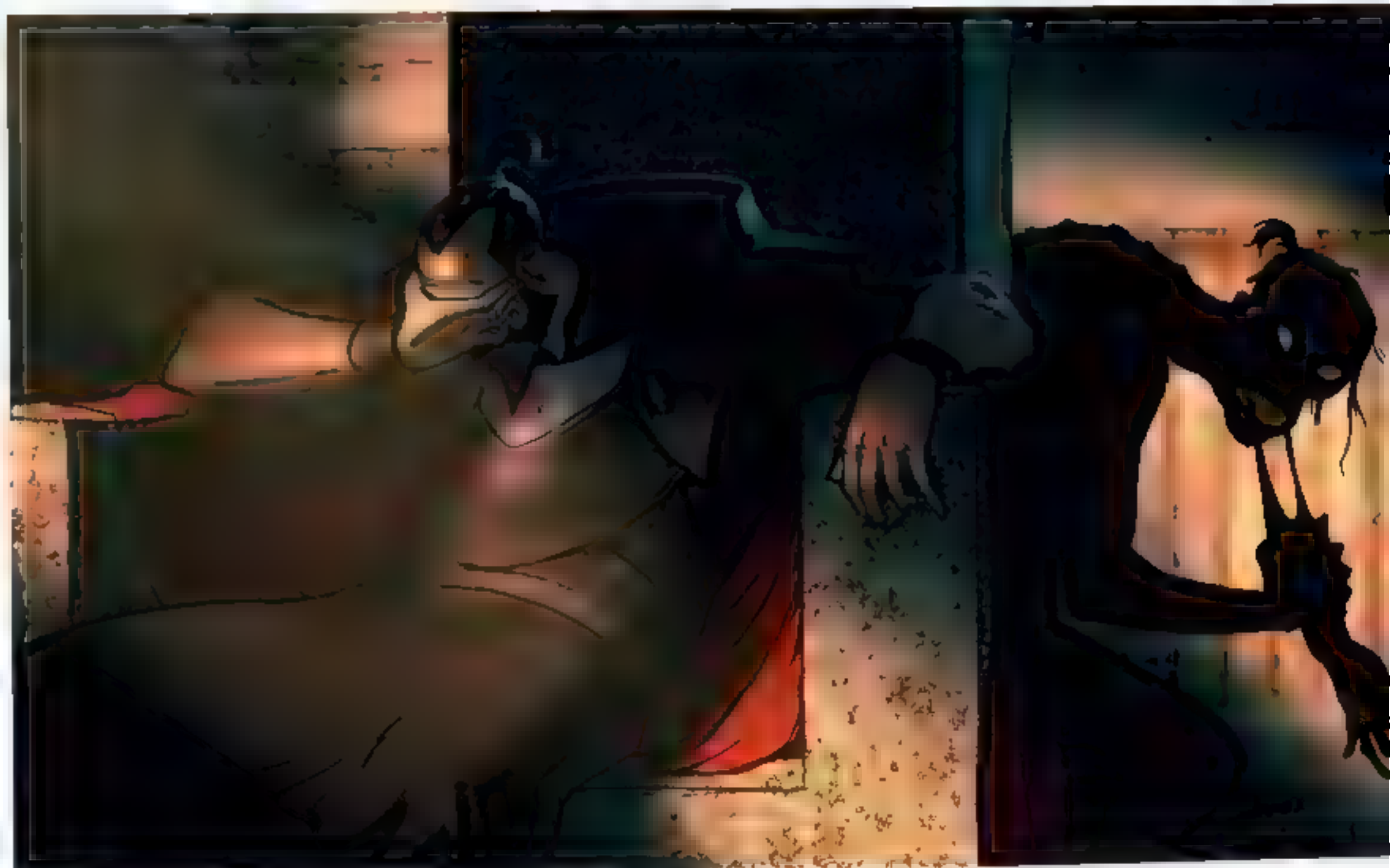
"At that point we'd written how many hundreds of thousands of words? We're tired. We're done," David says.

"The banter was always huge because we were always, like, laughing and really at that point, our field of fucks was rather barren, so we would just do whatever."

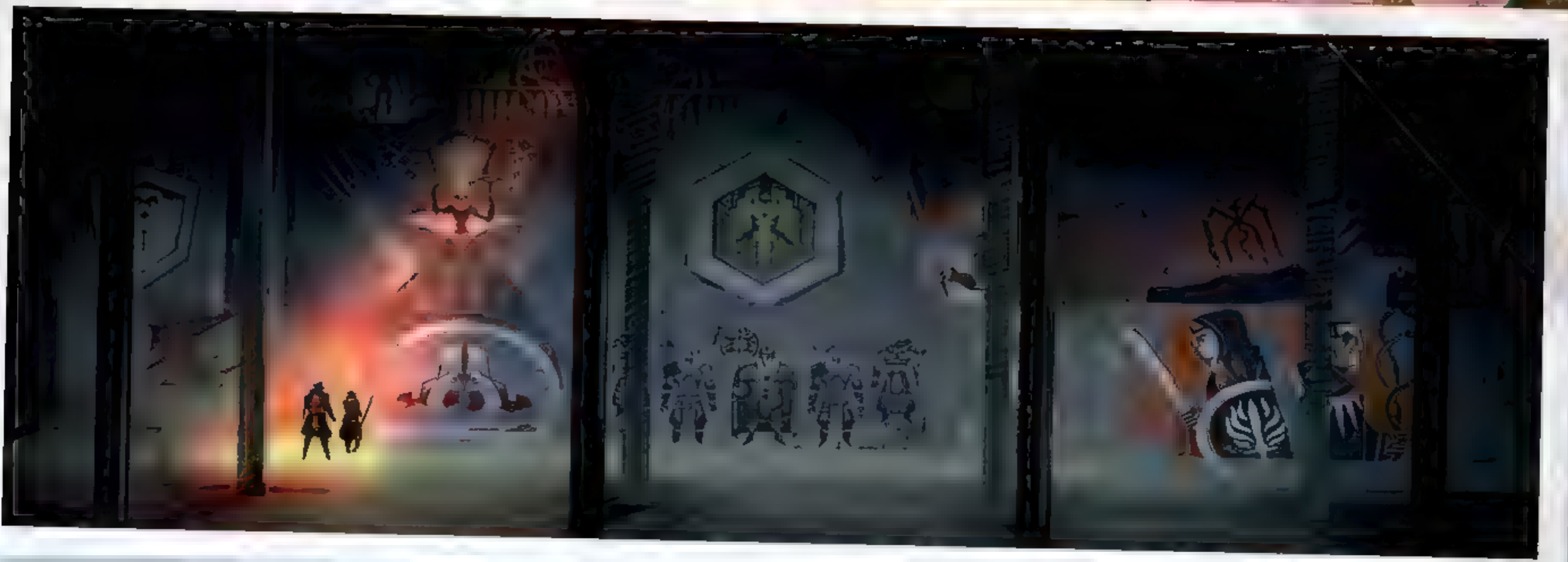
Banter allows the writers to explore details about their characters by having other characters ask questions. Through banter, the writers also get to explore how well or poorly each party pairing gets along.

There's also plenty of opportunity for antics. Sera tries on nicknames. Varric talks plans for a serial. Solas and the Iron Bull play an entire game of chess.

"We spent a lot of time laughing," David says. "I'm sure people passing by our office must have thought we were the silliest group. But that was just our process."











During development of *Dragon Age: Inquisition*, the official map of Thedas was printed out on massive poster paper and hung up in the Edmonton studio's lunchroom, with key locations pinned up to let the dev team visualize the scope of the game they were making—while microwaving leftovers or fixing their fourth coffee of the day.





## REAL TALES OF DEVELOPMENT: ANATOMY OF A BOG UNICORN

**DRAGON AGE ART DIRECTOR** Matt Rhodes has created many memorable characters and creatures during his time at BioWare. In *Inquisition*, the team set out to fill Thedas with a veritable zoo of new animals to find—and sometimes ride. Matt says the bog unicorn was among his favorite to design, and it pretty much happened by accident:

*We needed horse variations. I had already designed a variation on the undead that was a bog mummy. And for anyone who hasn't seen them, bog mummies are preserved in a much different way [than traditional mummies]. When someone dies in a bog, it's like their skin turns black and raisin-like . . . And I don't know if something changes in the hair, or if it's just redheads who died that way, but they usually have very bright red hair.*

*It's a very striking look, and I thought it would be neat to do a horse version of that.*

*So we make this bog horse, and then five minutes before the review meeting, I suddenly have this "Aha!" moment where I quickly looked up a rusty old Viking sword. I photoshopped it right through its skull, like that was how it died. And I was like: "I just made a unicorn. All right, and in it goes!"*

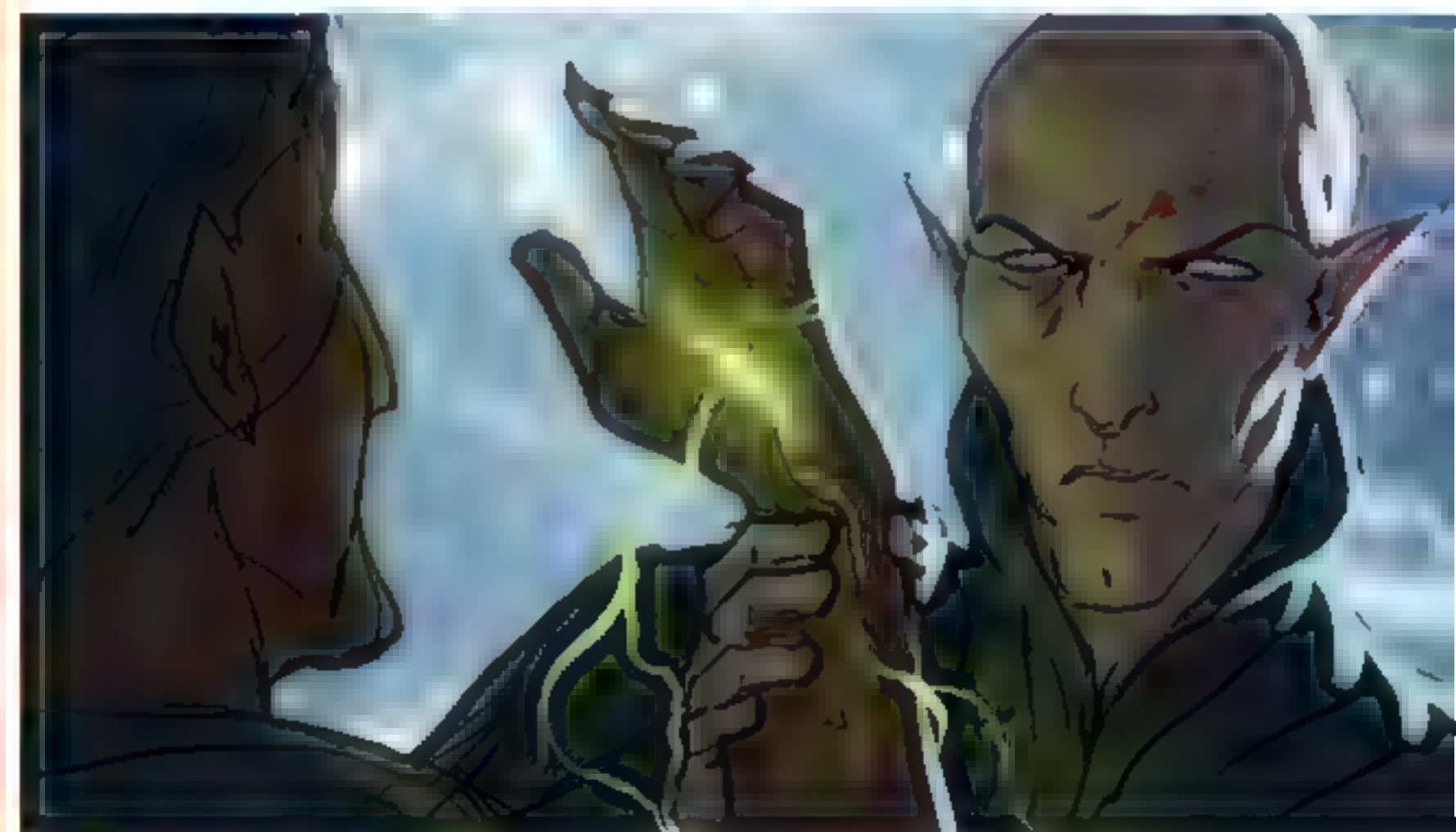
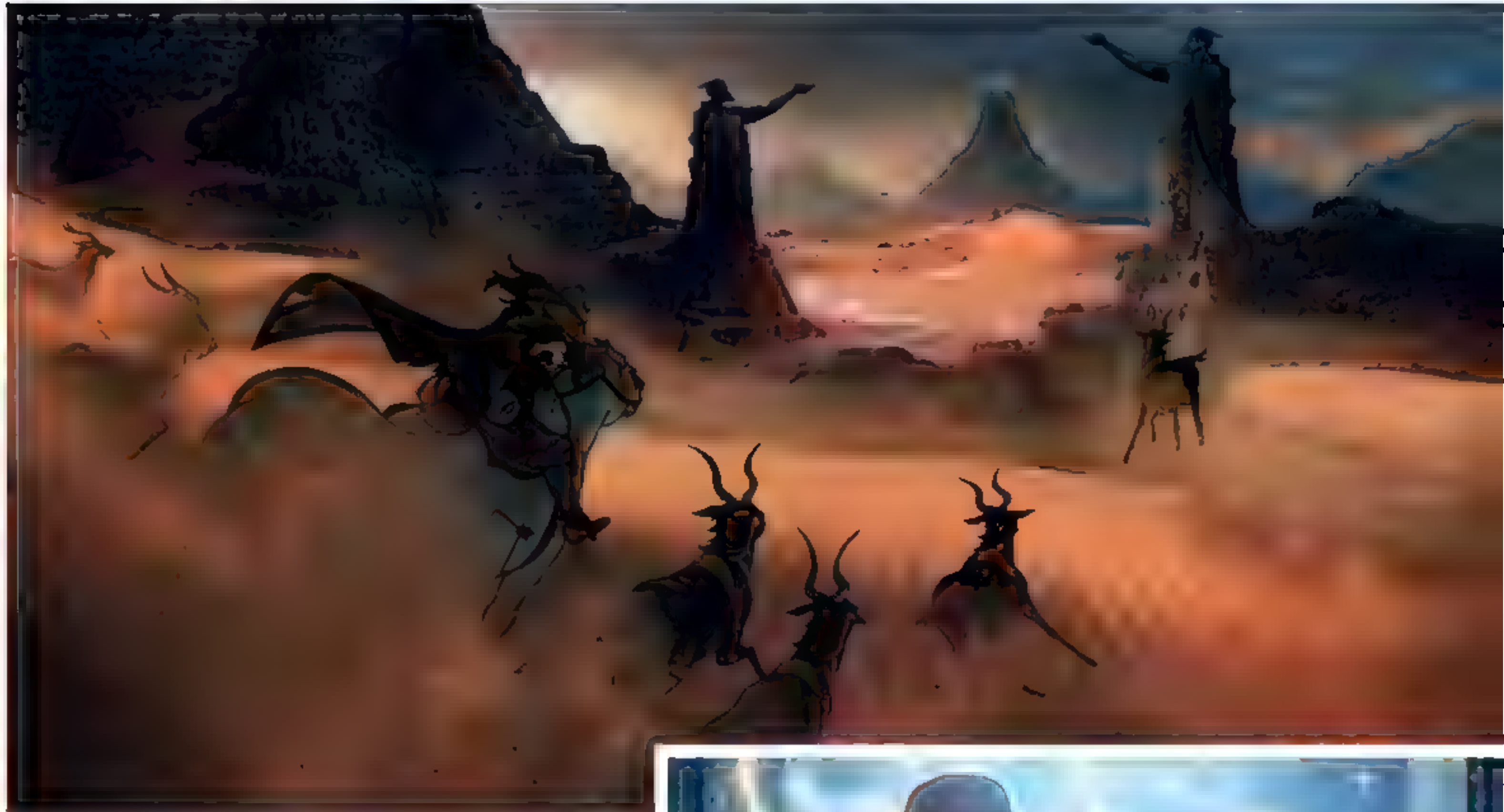
*It got approved.*

*So we built the thing. It fit. It told a little story. I wasn't trying hard. It was just something that came together very quickly. And it's one of the designs that I'm kind of most fond of for that.*

*There's this idea with sculpting, and art overall, where you almost want to avoid getting fingerprints all over it, which is like showing that it's been labored over. Whereas if it's just clean, like it just happened, it's a lot more appealing.*







As the team worked on the concept art, Matt Rhodes, who was creating images to represent the game, was one of the first to see what the game could be.

It was partly to encourage and partly to show the team what the project could be. Matt says, "We all imagined what the game would do to get that on paper to remind everyone of the making of something that could be pretty cool."





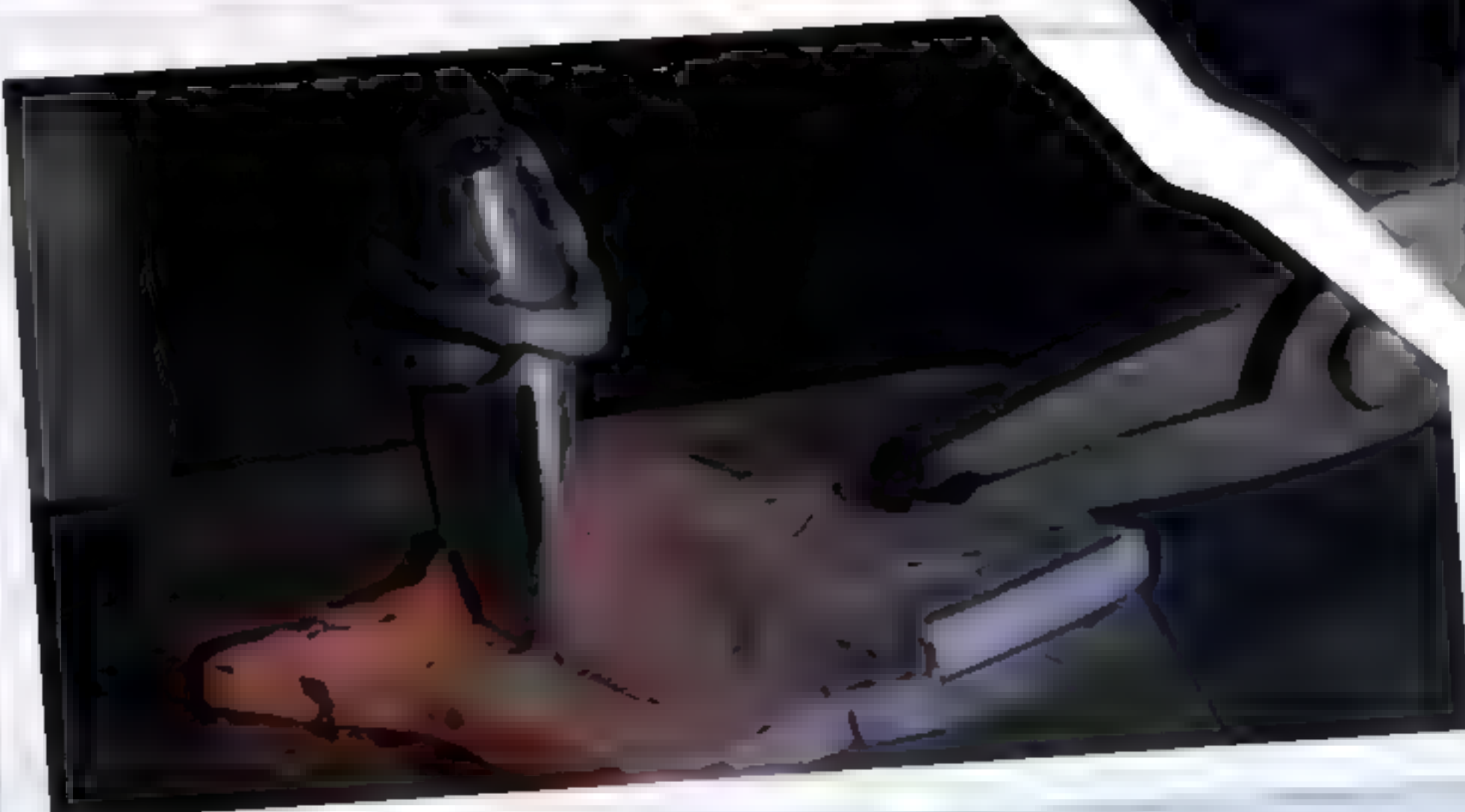
## FORGING THE INQUISITION LONGSWORD

TO PROMOTE THE RELEASE of *Dragon Age: Inquisition*, community team members Sean Trayner and Conal Pierse commissioned the forging of an actual Inquisition longsword. An Edmonton blacksmith made the sword using a combination of modern and traditional methods, with art from BioWare's concept artists as a guide. Presented with the finished and very real sword, Conal immediately decided to use it to cut some stuff on camera, leading to a video entitled "Will It Cleave?"

Among the items the sword indeed cleaved were roses, various types of produce, a gingerbread house, raw chicken breast, Leliana's nug Schmooles (plush, don't worry), and a jellied head named Steven.

Another head named Charles that was made of Styrofoam did not cleave.

"I had to climb into the rafters of a studio to retrieve loose bits of chicken that had been flung there by the sword," Conal says. "So that's, like, something you don't really do in other jobs, and I've had a lot of minimum-wage jobs."











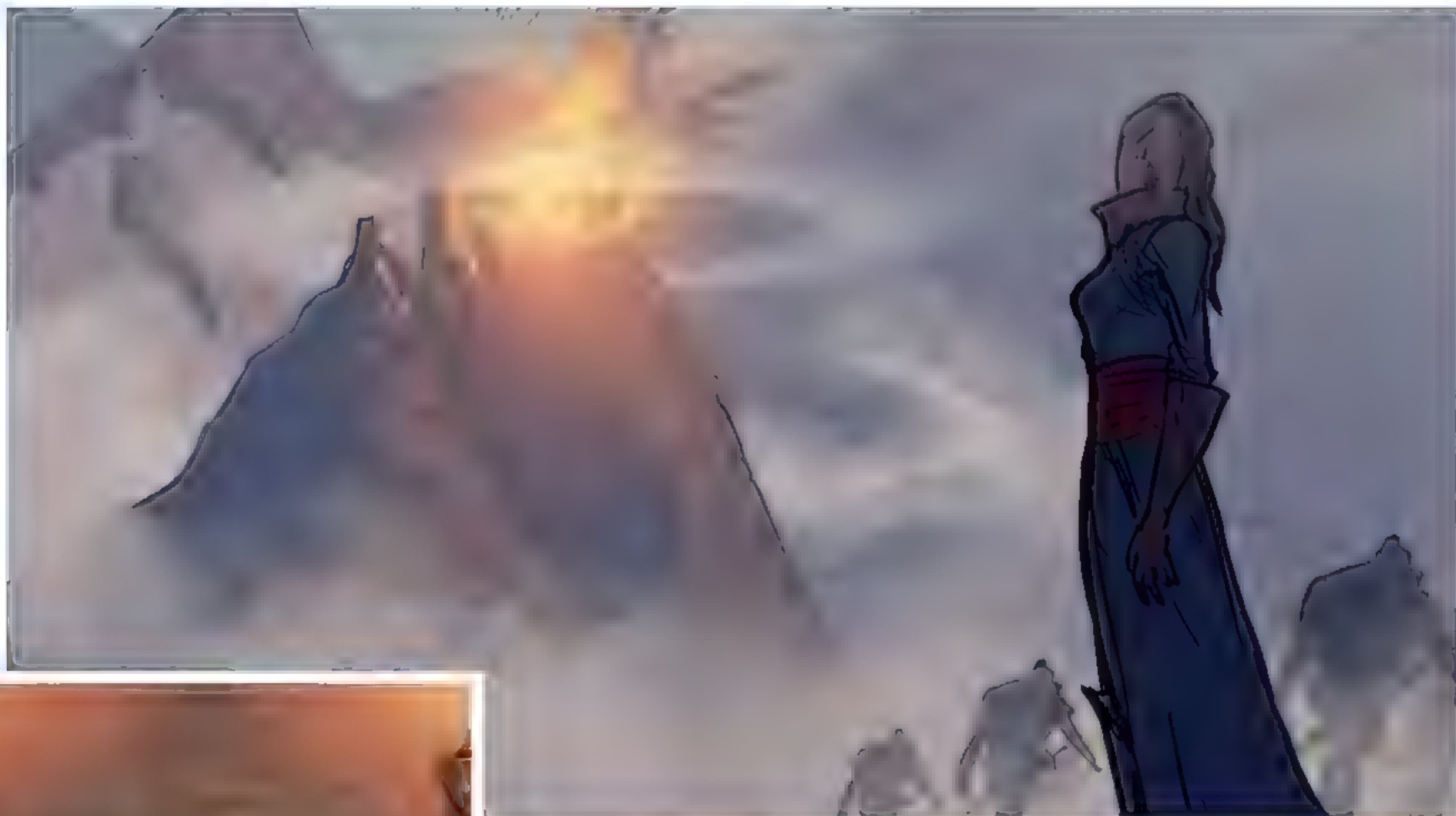
Pillars upon pillars of art were created to *Dragon Age: Inquisition* by multiple artists, each with their own styles and inspirations. Individual pieces were mashed up during development to see how well they all fit together. This helped give each faction in the game a stronger visual identity.











BUG REPORT:  
**INFINITE PONY EXPRESS**

**Release:** *Dragon Age: Inquisition*  
**Priority:** 1 (Severe)

**Description:** Endlessly spawning mounts! At one point during development, Inquisitors could summon a new horse every time they whistled, allowing them to amass a near-infinite number of eager steeds that faithfully followed them across Thedas. "You could go charging across a level and they'd all gallop behind you," tester Jennifer Cheverie says. "It was beautiful." Trotting into town became an epic horse siege as a tidal wave of mounts enveloped the streets. Jen called it her "Army of Ponies."







The concept art team explored a wide range of visuals for the Inquisitor's signature mark. It needed to look powerful and raw, but it couldn't look like a horrific wound. In some cases, as cool as the ideas looked on paper, they just weren't technically feasible, especially since the mark had to fit on any number of different bodies.





## MARK DARRAH'S MYSTERIOUS RED BOOK

**DRAGON AGE EXECUTIVE PRODUCER** Mark Darrah tweeted a photo in 2016 of a mysterious red book with a flaming rook on the cover. Twitter went wild with speculation.

The book was an internal guide for developer and publisher eyes only that summarized the vision for *Dragon Age: Inquisition's* follow-up, a project code-named Joplin. The Joplin project has since been revised to such an extent that its code name changed to Morrison, but the red book still contains plenty of ideas likely to appear in the next *Dragon Age*.

While most pages remain highly classified, here are a few Mark said we can publish.

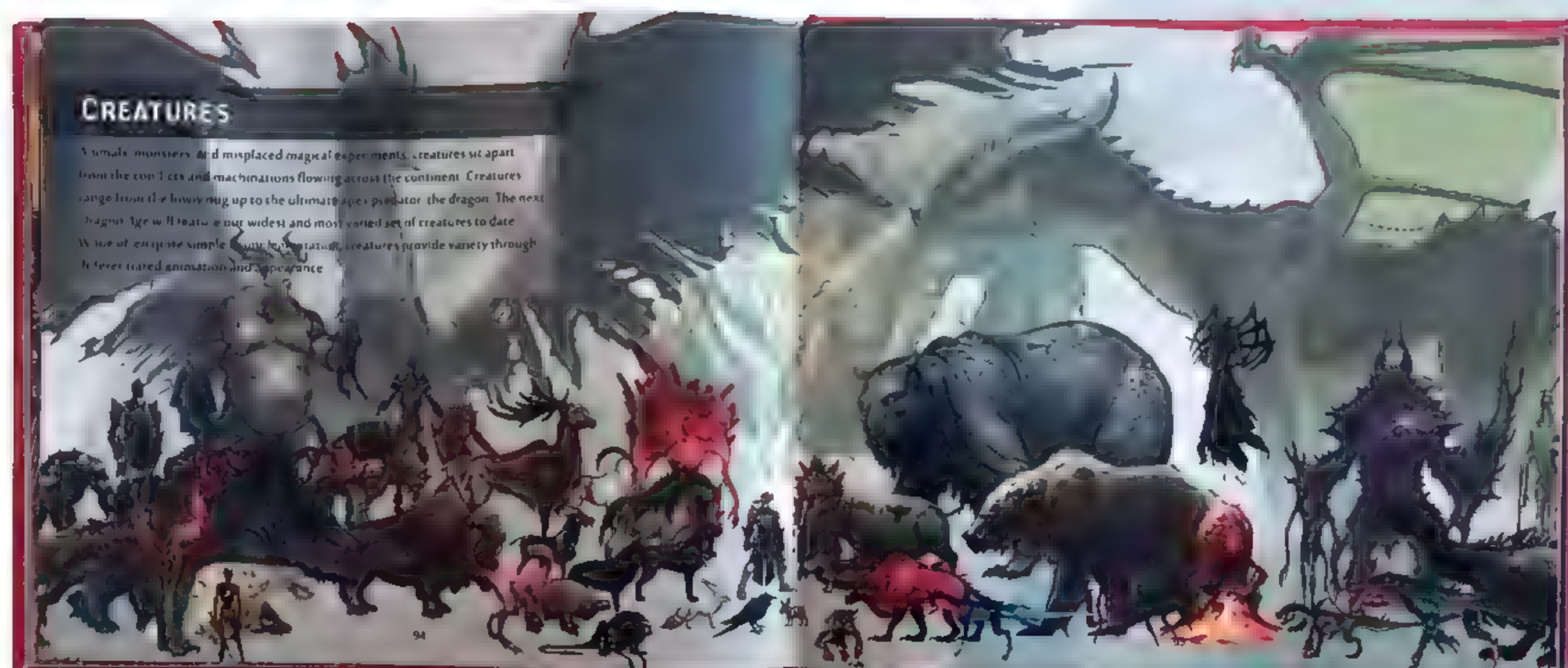
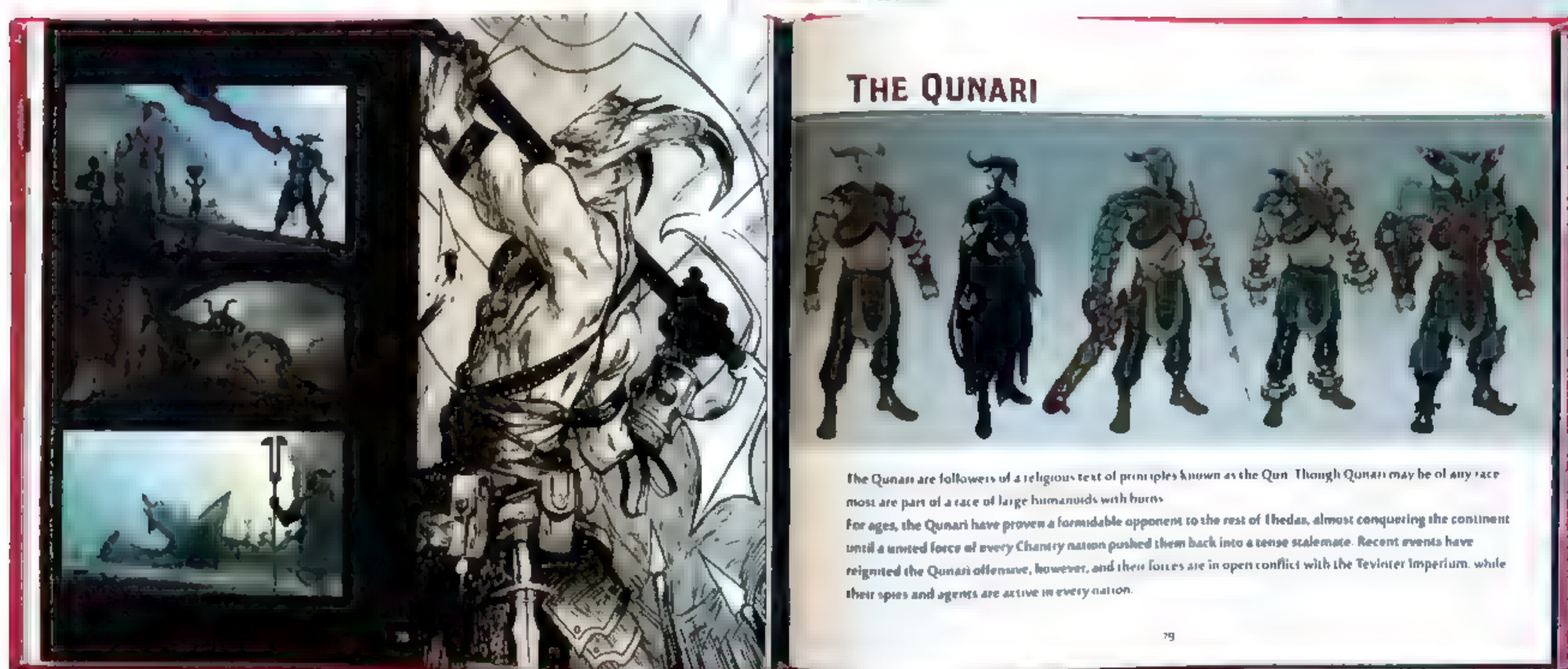


Mark Darrah  
@BioMarkDarrah

Oooh what's this?  
Oh sorry



424 831





## THE SPOILS OF DA WEEK

**DA WEEK IS A** five-day period during which members of the *Dragon Age* team can pursue creative projects that in some way benefit *Dragon Age*. The work done during DA Week, and its erstwhile cousin DA Fridays, sometimes found its way into releases.

"The giant in *Inquisition* came out of a DA Week," executive producer Mark Darrah says. "We also had a board game made that we were going to put into *Inquisition*, but we just didn't have time to. It's referenced. It's a dwarven chess."

Programmer Owen Borstad used his time during DA Weeks to instead create art for the studio.

"In the post-*Dragon Age II* time frame, there was a DA Week we were given . . . and I was like: I'm going to build a chain mail banner," Owen says. "So I plotted it out and figured out how to make this thing. I did it in Photoshop, but then printed out myself a plan and quartered the materials."

He designed a  $2\frac{1}{2} \times 4\frac{1}{2}$ -foot banner with the symbol of Kirkwall, the setting for *Dragon Age II*. The project ended up taking much longer than the DA Week allowed. Owen and another programmer spent more than forty hours assembling the banner. It then hung in a place of prominence on the *Dragon Age* floor of the Terrace Office Tower until the team moved to EPCOR Tower in 2019.

Owen later created a Qunari symbol of similar size entirely out of paper. That piece also found a place on the wall of the studio, though it has since been lost.





## The Iron Bull



Once an agent of the Ben-Hassrath, the Iron Bull grew weary hunting opponents of the Qun. Sent to Orlais by his superiors, he now finds himself as the respected leader of the Bull's Chargers, an adept band of mercenaries. He and his Chargers are happy to hunt demons for the Inquisition, at the right price.

The Iron Bull towers over anyone and bears an impressive set of horns, even by Qunari standards. Leather armor only sporadically covers his battle-scarred body, allowing him to make massive sweeping strikes with a battleaxe. Loose pantaloons and leather boots give him plenty of agility for charging at his foes—likely their last moment standing.

### WHEN CONCEPT MEETS COSPLAY

IN THE LEAD-UP TO *Dragon Age: Inquisition* and through the releases of *Mass Effect: Andromeda* and *Anthem*, BioWare's community team began releasing character kits online. Each broke down the visual elements of a key character to aid in their accurate representation by cosplayers, artists, and other creators.

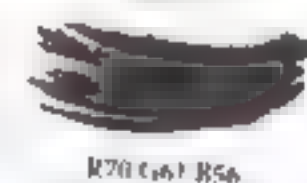
With *Inquisition* in particular, concept artists took special care to ensure costumes would be realistic, at least in a practical "this obeys the laws of physics and textiles" sense. Increasingly, however, the artists have been pushing the boundaries of what is physically possible with in-game character costuming.

"While on *Inquisition*, we thought about cosplay from a concept art perspective. Given how incredible a lot of them are, I now am not worried about them," *Dragon Age* art director Matt Rhodes says. "In fact, in some cases I want in the future to throw them curve balls, like, all right, you clever bastards. Let's see if you can do this!"



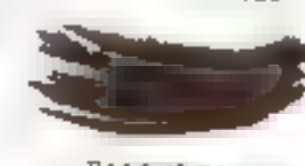
#### Colors and Materials

##### Horns



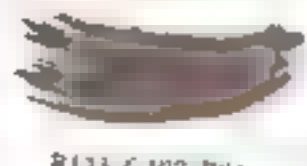
R70 G61 B56

##### Leather Armor



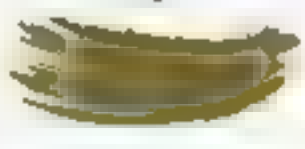
R66 G47 B32

##### Skin



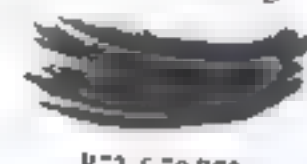
R123 G107 B94

##### Insignia



R122 G111 B29

##### Plate Detailing



R72 G70 B75

##### Insignia Detail





## The Ambassador



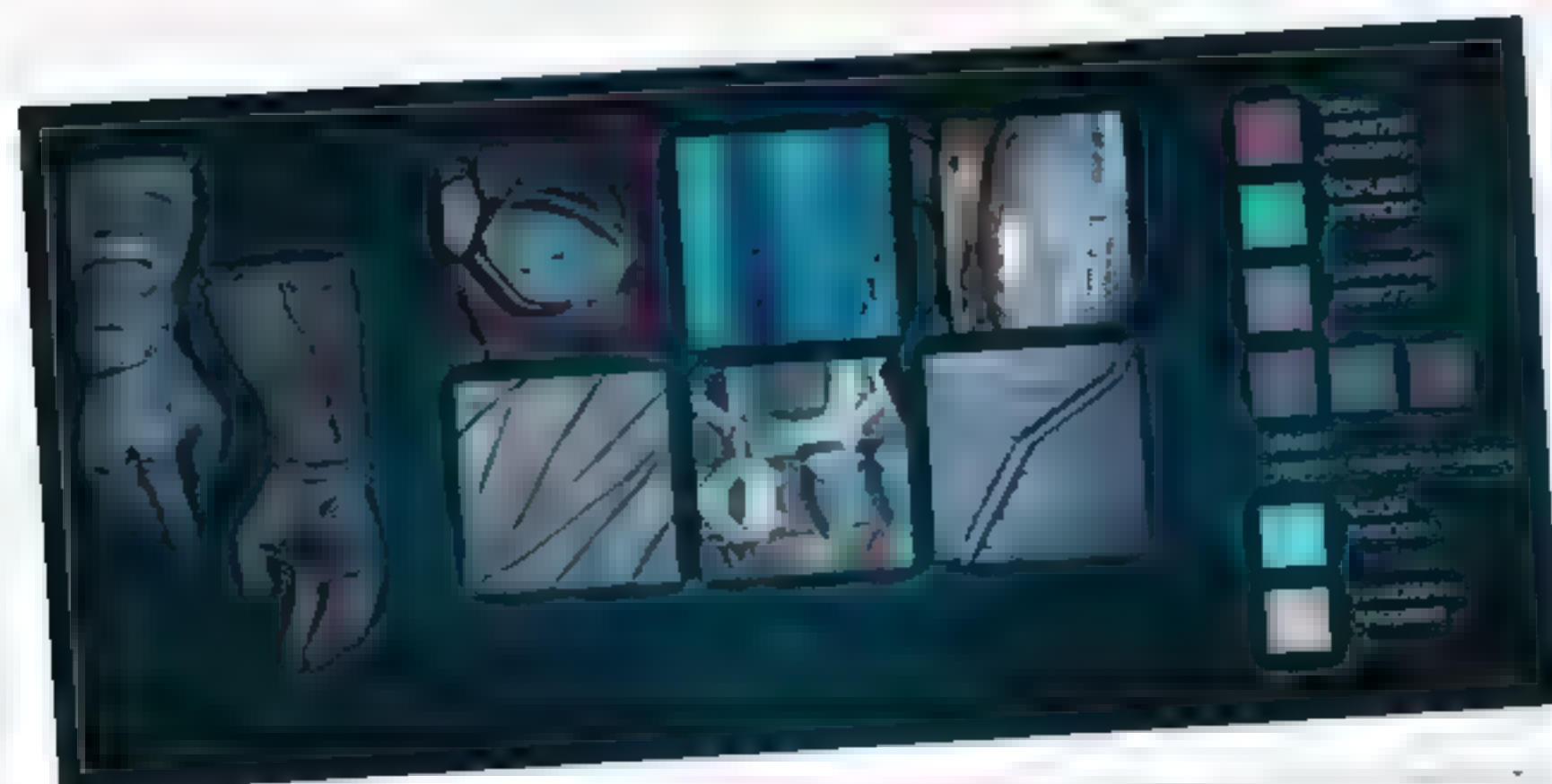
**W**hen victories and alliances cannot be forged with strategy and sword alone, Josephine is the Inquisition's voice in the halls of the influential. She builds relationships with key players across Thedas, for bolstering the Inquisition's strength requires the help of those in high places.

Adorned in golden silk and patterned velvet, Josephine easily takes her place among even the most distinguishing of nobles. She carries an ornate ledger and pen to record messages and establish treatises. An ornamented collar sits around her neck, finished by a brilliant red ruby, like a drop of Antivan wine in a sunbeam.

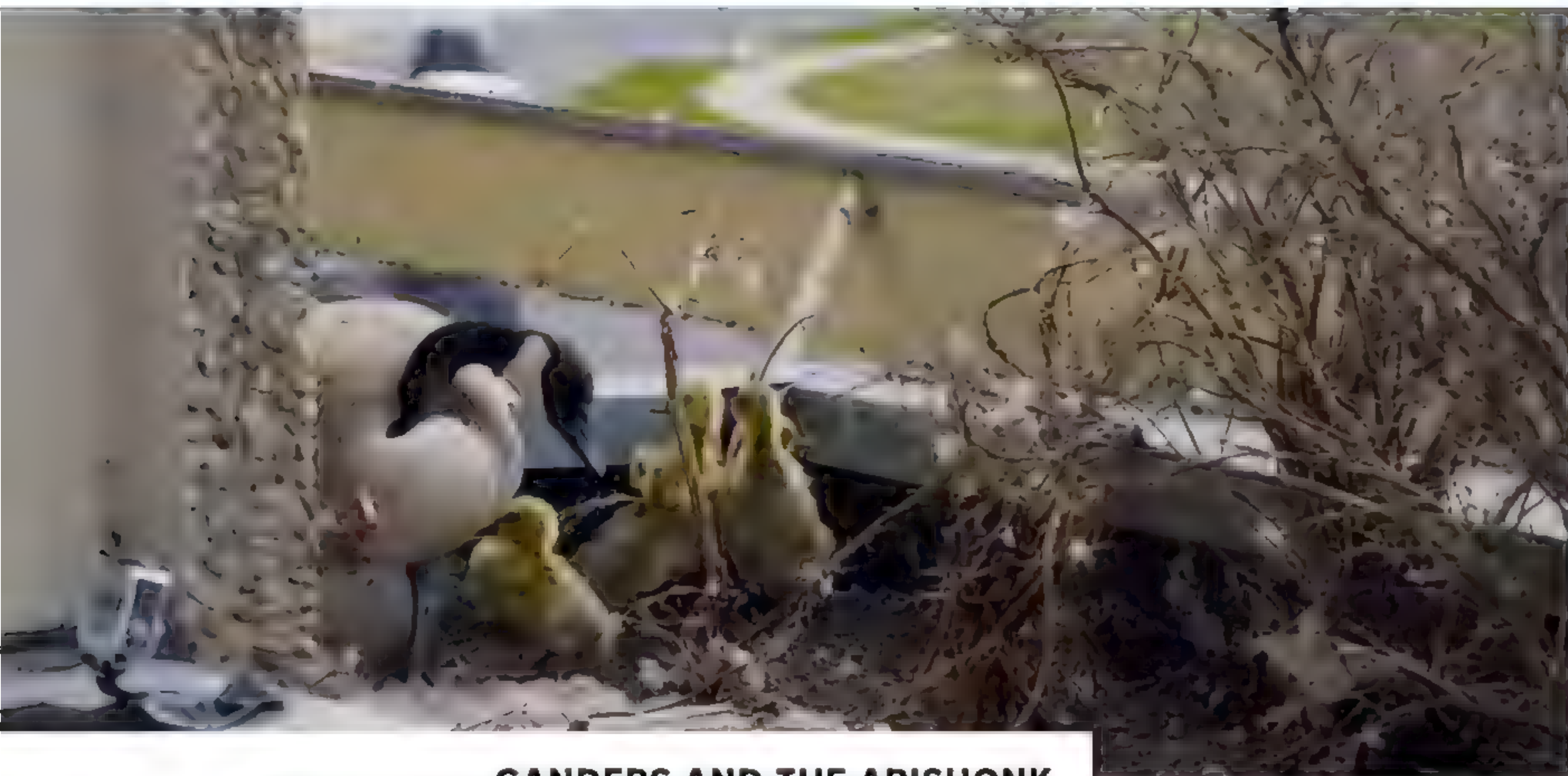
### Colors and Materials



**BIOWARE**  
A DIVISION OF EA







## GANDERS AND THE ARISHONK

BIOWARE EDMONTON'S OFFICE GEESE

**"IT'S FIVE O'CLOCK ON A FRIDAY, SO THEN WE HAVE TO STOP FOUR LANES OF GATEWAY BOULEVARD TRAFFIC BECAUSE GEESE ARE ASSHOLES AND THEY DECIDE THAT'S WHERE THEY WANT TO CROSS."**

—FORMER COMMUNITY MANAGER CONAL PIERSE

ONCE UPON A TIME, specifically the spring of 2016, a couple of Canada geese who were very much in love decided to nest in the terraces of the Terrace Office Tower in full view of BioWare Edmonton developers.

The geese were named Ganders and the Arishonk by Twitter, punny twists on the *Dragon Age II* characters Anders and the Arishok. The mother goose (it's not entirely clear if this was Ganders or the Arishonk) laid a handful of big old goose eggs in the nest, while the father goose kept guard in the parking lot, threatening anyone who dared walk into the building. It was very romantic.

"Geese are dicks," former community manager Conal Pierse says. "They're beautiful birds if you've never met them. But if you get close to them, they're these angry, hissing things that spit at you. I didn't know birds could spit until I met Canadian geese."

When the nest was built, many at the studio crowded around one of only a couple of windows where the view was good enough to see the nest. It became a problem for the developers working at those windows. Then came the eggs. That's when the community team set up a webcam, pointed at the nest from inside the studio, so developers and the community as a whole could watch nature be all majestic from the comfort of their internet. They added a loop of BioWare soundtrack music to play over the stream and a basic chat, then set it live, expecting that maybe fifty people would watch. In the end, millions of hours were logged as people from around the world flocked by the thousands to watch the BioWare Goose Cam online.

The eggs hatched the first day of the stream. In the days that followed, fans watched at work and in classrooms as the goslings grew and took their first steps while Ganders and the Arishonk protected them.

"You're watching life happen and it's beautiful," Conal says. Meanwhile, there were birds circling overhead, crows, magpies, even pigeons, looking

like they would very much eat baby goslings. "So, you know, that was our worry," Conal says, "that we're going to have, like, a literal crow murderer on the stream at some point, or, like, pigeons just eating these corpses."

Instead, a different problem presented itself: The nest was built in a planter outside an office building, a few stories up and wedged between two busy roads. The goslings would need to get down somehow and safely cross four lanes of traffic in either direction. They weren't yet able to fly, but they sure could waddle.

Conal and a few other brave developers, together with wildlife authorities and the Facilities team, shepherded the delicate goslings into a pet carrier attached to a rope and lowered them to the parking lot.

While this was happening, the goose parents were furious.

"We are, like, trying to chase away the mother with brooms while she's angrily hissing and swinging her wings," Conal says. "An angry mother goose is a terrifying sight. They have enormous chest muscles—like cantaloupe-sized chest muscles—and they can break your arm with their wings, and they can definitely snap fingers with their beak."

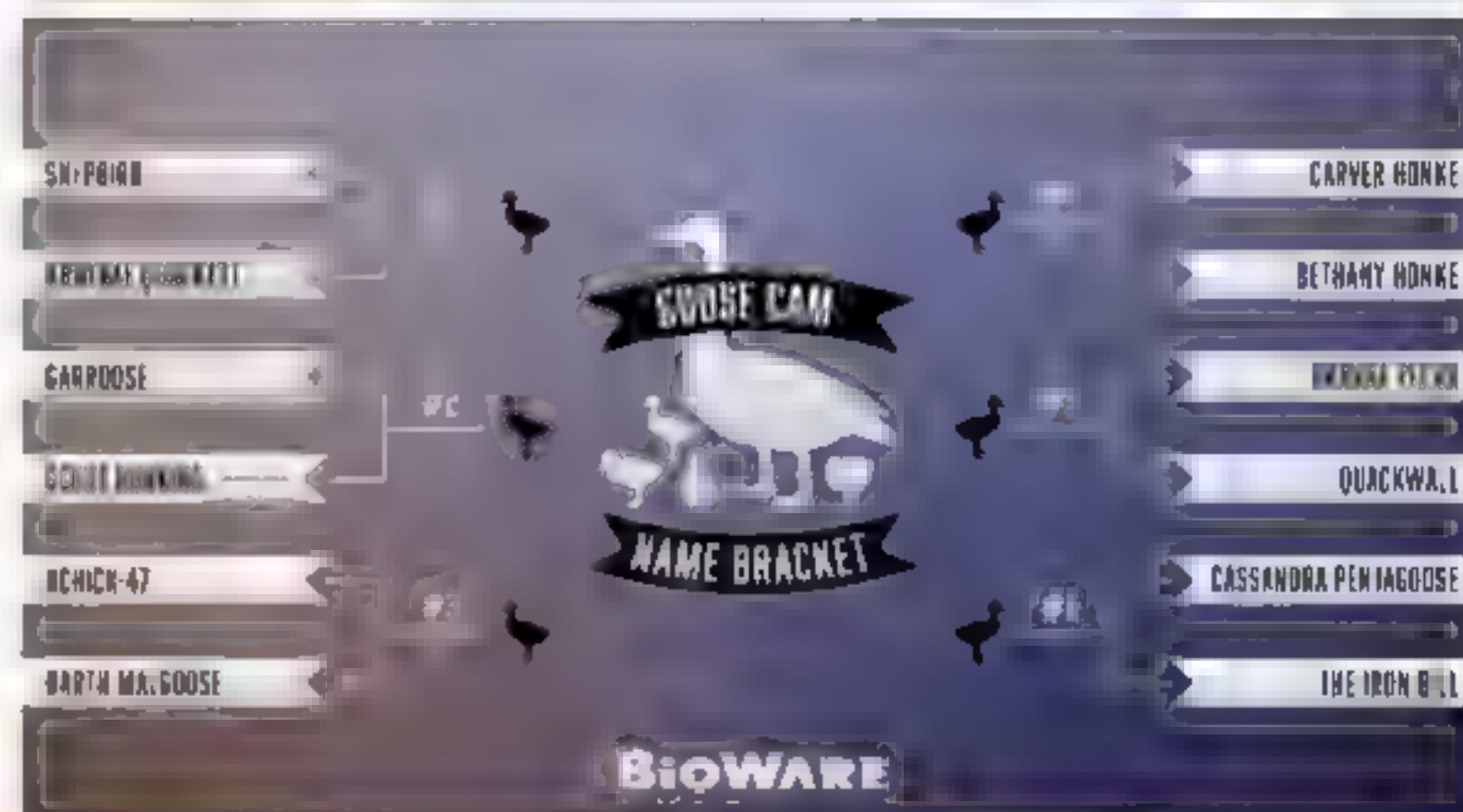
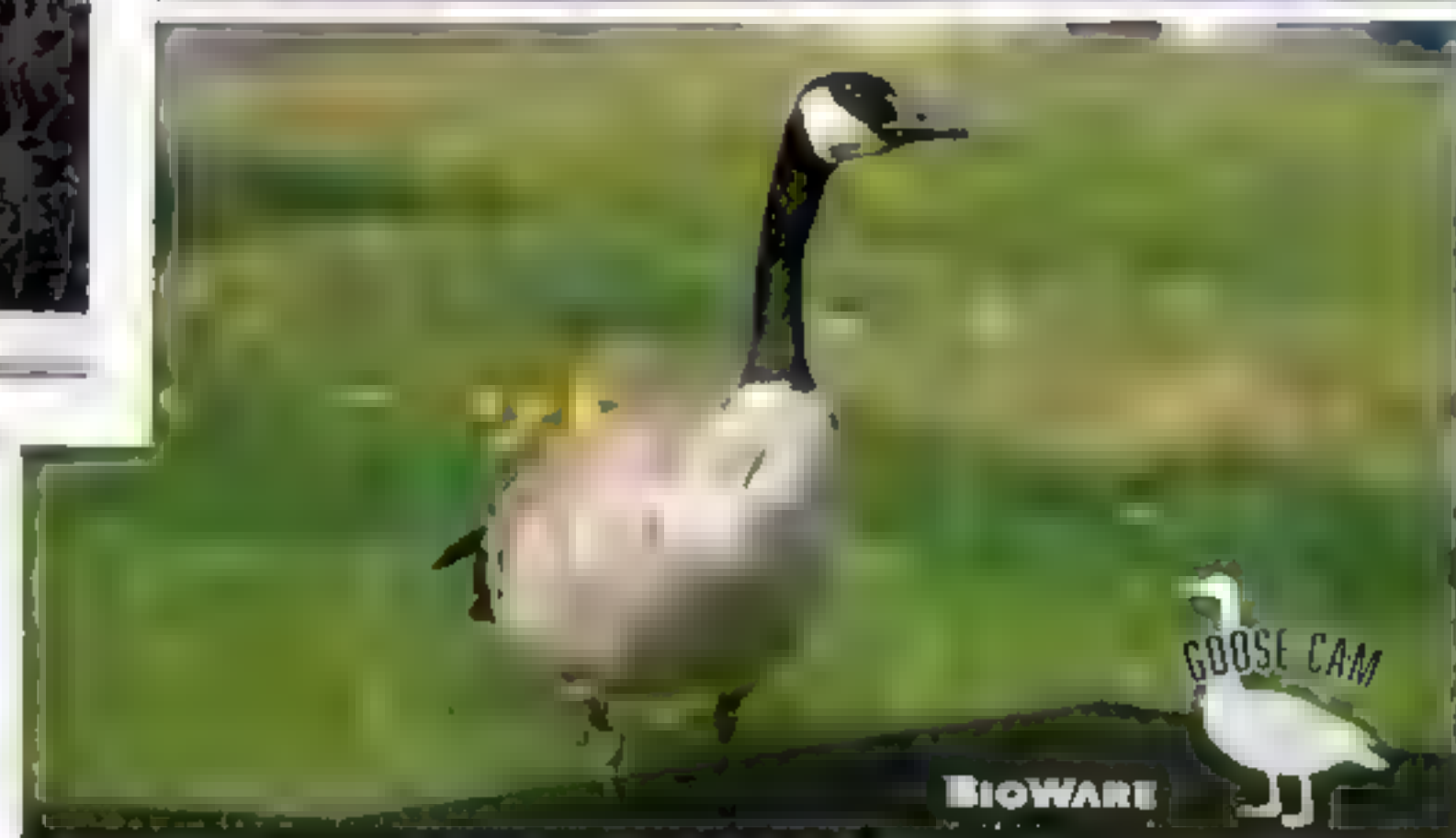
None of that happened. When the goslings emerged from the carrier, the mother and father geese collected them, said a quick "eff you" in goose, and as a family, began to waddle through rush-hour traffic.

"It's five o'clock on a Friday, so then we have to stop four lanes of Gateway Boulevard traffic because geese are assholes and they decide that's where they want to cross," Conal says.

The geese thankfully made it safely across and ventured forth into the world. The Goose Cam was a success. The team was exhausted.

"And then the next year, they use the same god-damn planter," Conal says.





**BUG REPORT:**  
**THE SURPRISING**  
**ADVENTURES OF**  
**SER NOODLES**

**Release:** *Dragon Age: Inquisition*

**Priority:** 1 (Severe)

**Description:** *Inquisition* was the first time *Dragon Age* developers experimented with adding mounts, allowing the player a faster method of travel across the game's sprawling maps. The feature led to some of the team's favorite bugs, including a period of time when the Inquisitor's horse seemed to lose all muscle and bone in its legs. "We had a week or two where all the quadruped rigs were broken," tester Jennifer Cheverie says. "It was a little bit noticeable with all the nugs and the foxes running around . . . but the first time we summoned the horse and started running around with it, the entire QA exploration room just exploded with laughter." The horse's legs flapped and flew around like cooked fettucine, leading testers to lovingly nickname it Ser Noodles. At galloping speeds, the legs almost looked like helicopter blades—especially epic when footage was set to classical pieces like Wagner's "Ride of the Valkyries."







oftentimes in concept art clothes make the character. Artists will experiment with a wide array of outfits and styles, trying to find just the right look for party members and other key characters. For *Inquisition*, artists were asked questions like: "What would Morrigan wear to a formal ball?" and "Can Cassandra pull off a jaunty hat?"





With each new project, development teams at BioWare revise their approaches. On *Dragon Age: Inquisition*, storyboarding key scenes and plots became the norm.

"Cinematic design for the longest time was the Wild West," *Inquisition* cinematic designer John Epler says. "It was: 'Here's a bunch of content, now do it however you want,' which resulted in some successes and some failures." Storyboarding gave designers a consistent visual blueprint based on ideas from designers, writers, and concept artists.









"Storyboards are about shot selection. How this shot flows into the next shot into the next shot," says *Inquisition* concept and storyboard artist Nick Thornborrow, who drew the boards for the game's ending that you see on these pages.

Nick says storyboards allow the game's creators to test ideas cheaply and quickly. "Before I start boarding a scene, I'll consult with the writer and the

animator and any other stakeholders who are involved. We'll get on the same page about what we're thinking for the scene." Then he'll draw it. "The idea is to get something good on paper and develop that consensus early on, really early on, before you start building assets."





# THE MAKING OF

# SHADOW REALMS

## THE 4V1 FANTASY RPG GOES DARK



### KEY FACTS SHADOW REALMS

**RELEASE DATE:**

Unreleased

**GENRE:**

4v1 RPG

**PLATFORMS:**

Windows

Developed in Austin

Status: Canceled

**SHADOW REALMS** WAS an online RPG in development out of BioWare Austin that pitted four players against one in a contemporary magical setting. Initially planned as a PC exclusive, the game had players take control of four magic users called upon to battle a malevolent entity wielding incredible power known as a Shadow Lord, also controlled by a player.

Players in the four-person party could choose between multiple classes, including ranger, cleric, assassin, wizard, warlock, and warrior.

The story of *Shadow Realms* revolved around a mysterious school called the Woods-Watson Institute. While it appeared on the surface to be a typical college, its courses leaned away from a typical postsecondary curriculum toward options that were decidedly more magical. Themes of nightmares and magical realms hiding beneath the surface of a more mundane reality were in focus as players explored dark alleyways and dungeons.

As development progressed, *Shadow Realms'* concept evolved, moving away from its original vision as PC only and free to play as the team increased the game's fidelity and explored bringing it to consoles.

*Shadow Realms* was eventually canceled, but not before it was announced to the public in a series of live-action trailers—and even made playable at Gamescom 2014.

#### A MISSING PERSON IN AN ALTERNATE REALITY

To promote the reveal of *Shadow Realms* to the public, BioWare Austin community manager Eric Musco and his team cooked up an ARG (alternate-reality game). They built a website for the school, Woods-WatsonInstitute.info, which is no longer in use.

"What was cool about it—and this tied into the game lore that no one, I guess, will ever know—is that at midnight, every night, for one hour, the entire website changed to be super dark, like it changed to almost, like, to a dark mode," Eric says. "There were bloody Xs over every teacher's face and all the text changed. It was crazy."

The premise for the ARG centered around a missing girl named Henna. Community team

members created fake brochures for Woods-Watson that they handed out at San Diego Comic-Con 2014. Scrawled on every brochure were words like "Have you heard of this place?" and "Please help!" along with a second website, SeekingHenna.com, also no longer in use.

Visitors to that website found a cryptical blog post detailing the disappearance two years earlier of a puzzle-loving student named Henna who went by the name WhytheStarsShine online. The author of the post, named Blake, included every clue he had about Henna's disappearance, including an incident report and a photo of a message left for him in his school locker.

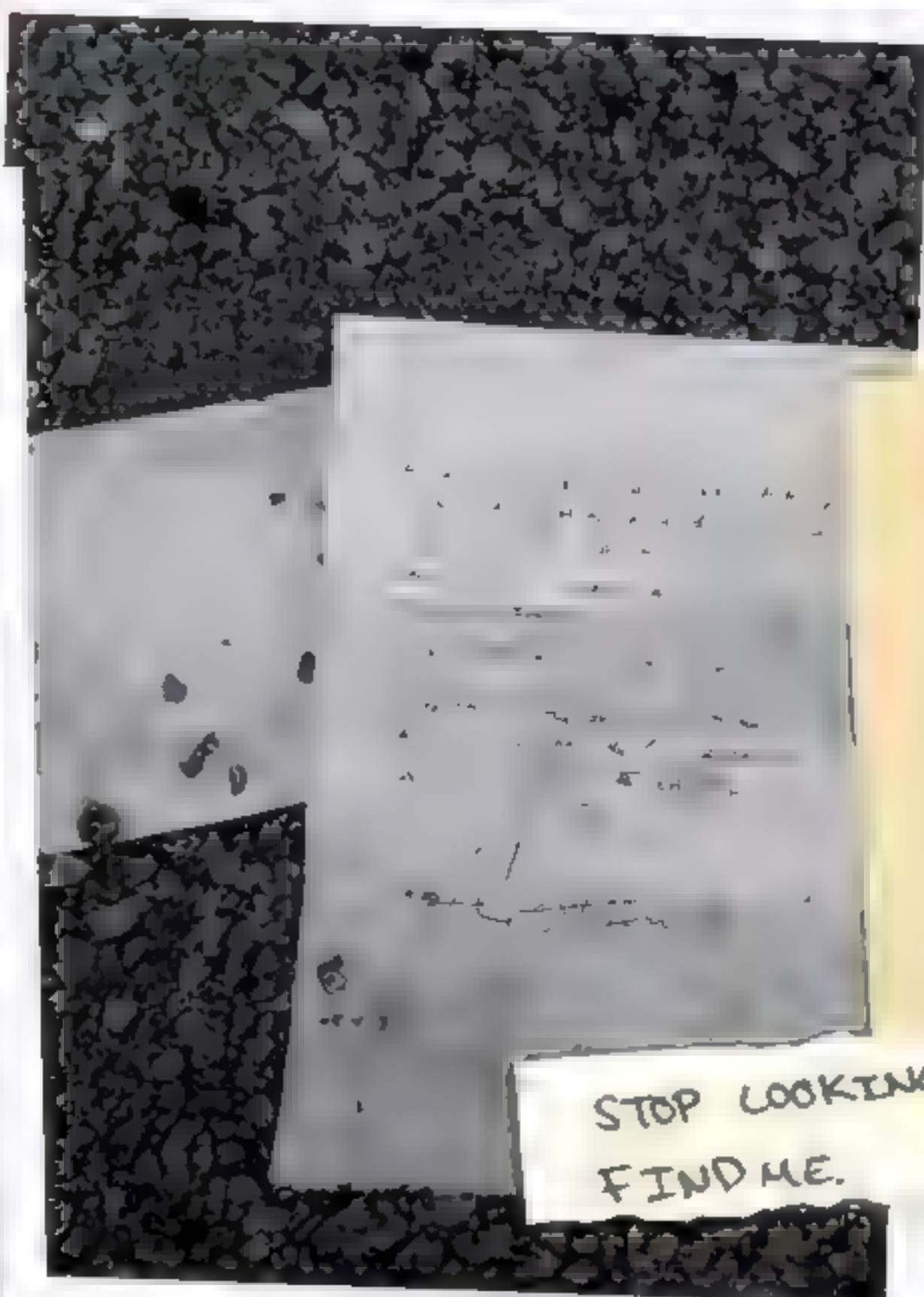
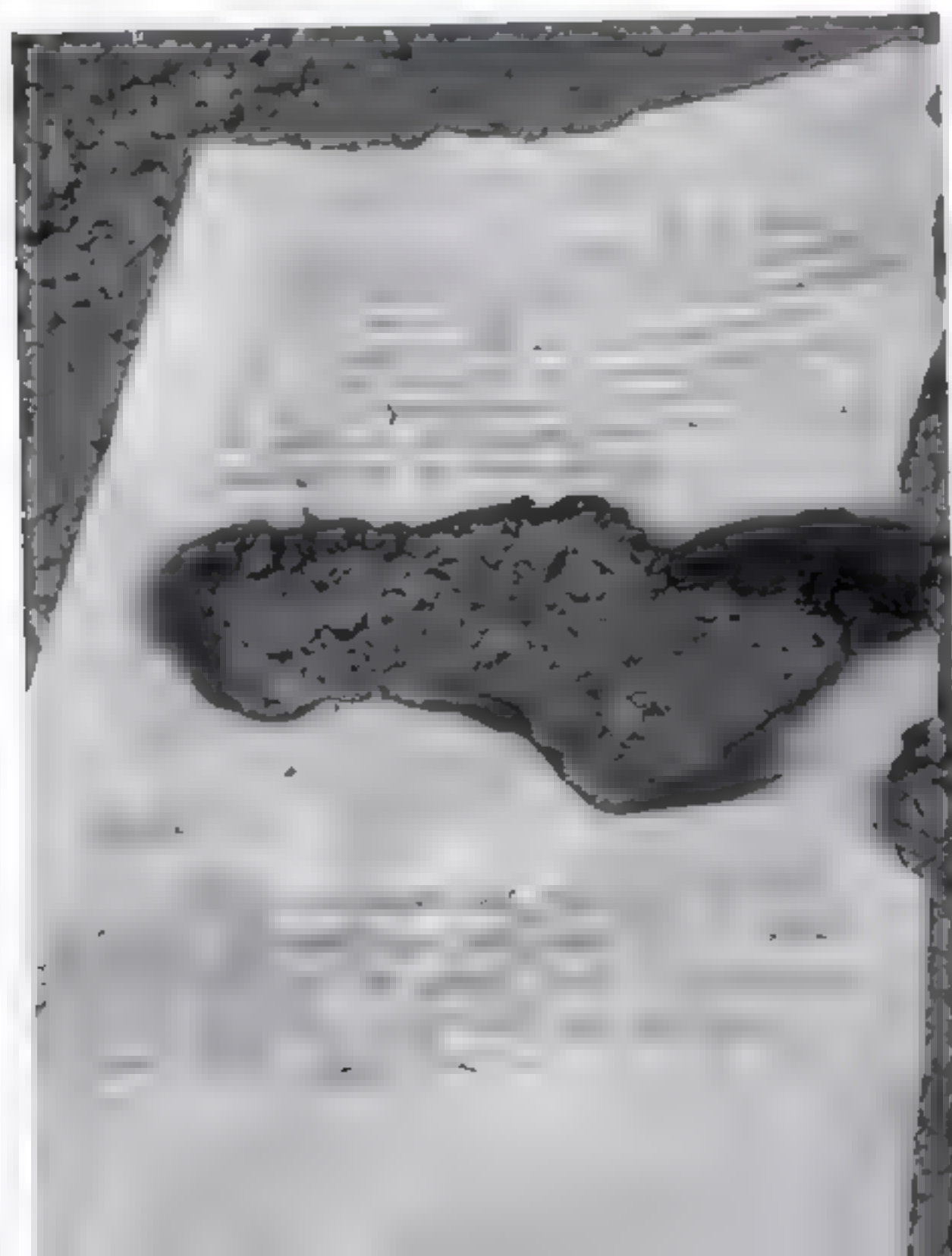
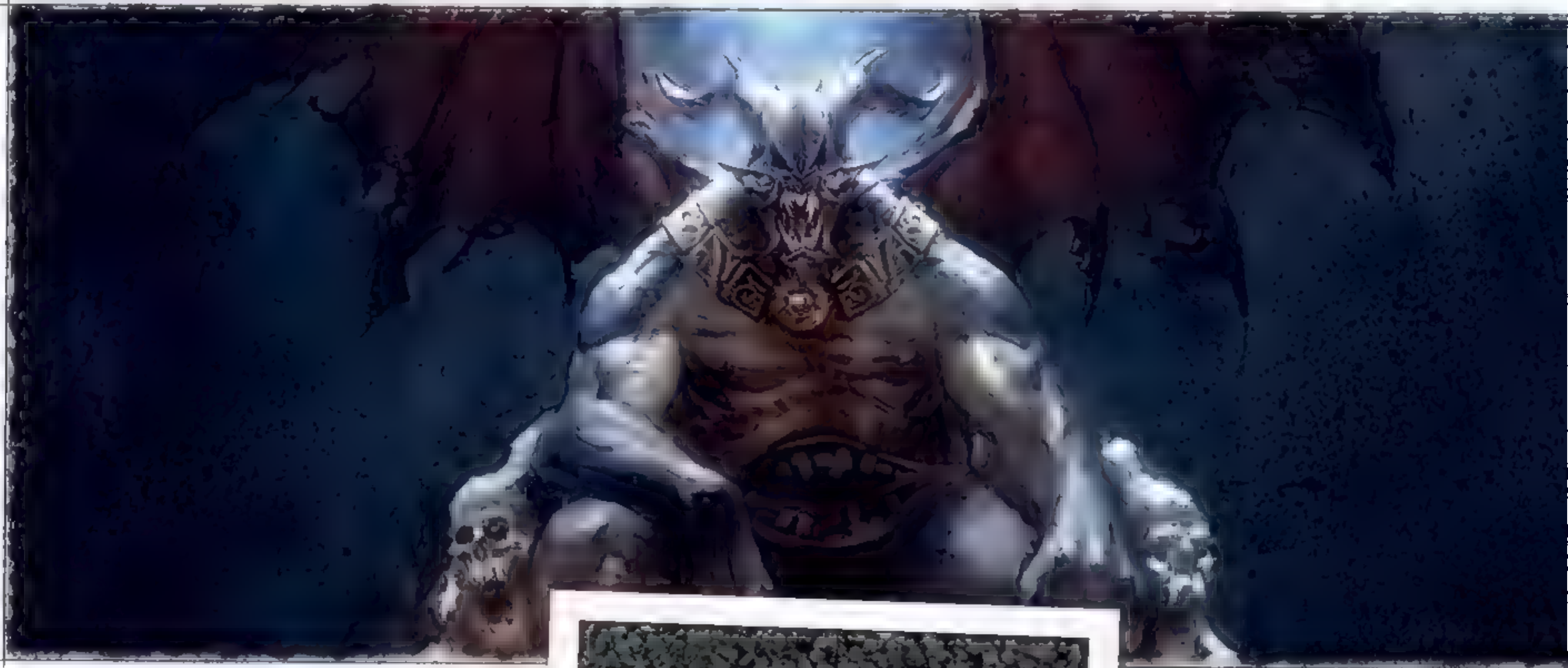
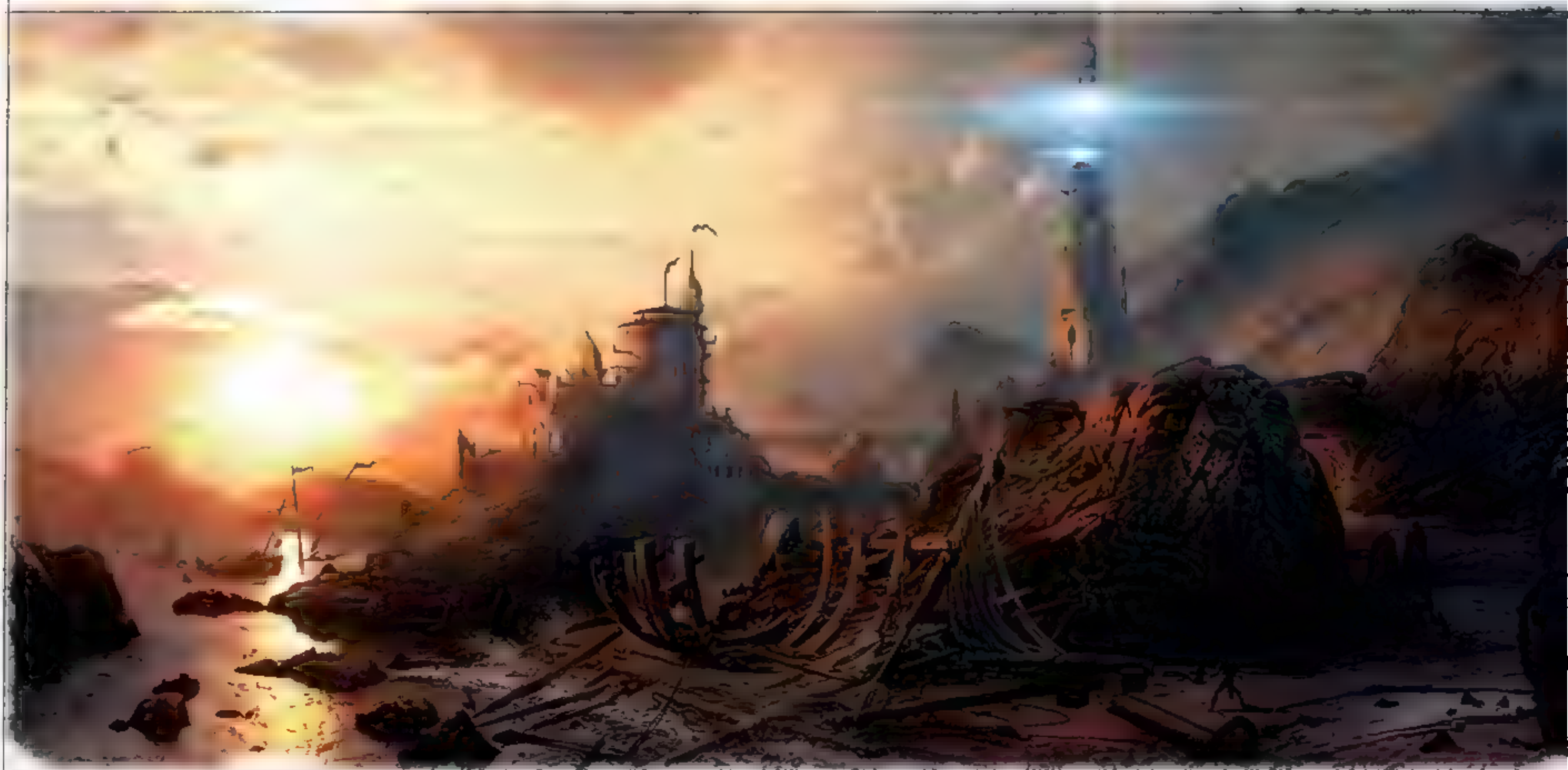
"It contained a single sentence," Blake wrote. "'Stop looking where you can't find me.'"

Community team members handed out thousands of brochures, directing anyone who grabbed one to visit these websites. There, they'd find hidden clues and puzzles that led to a GPS code and a date, all pointing to the Gamescom reveal.

In the lead-up to the Gamescom, BioWare also released several live-action trailers teasing the game. In one of the trailers, a missing-persons poster for Henna can be seen in the background.







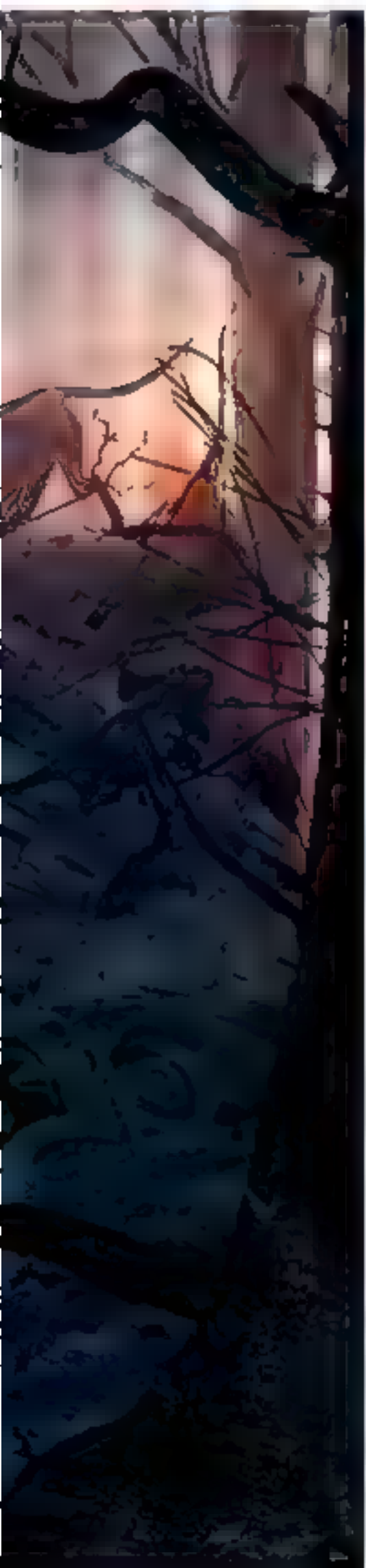
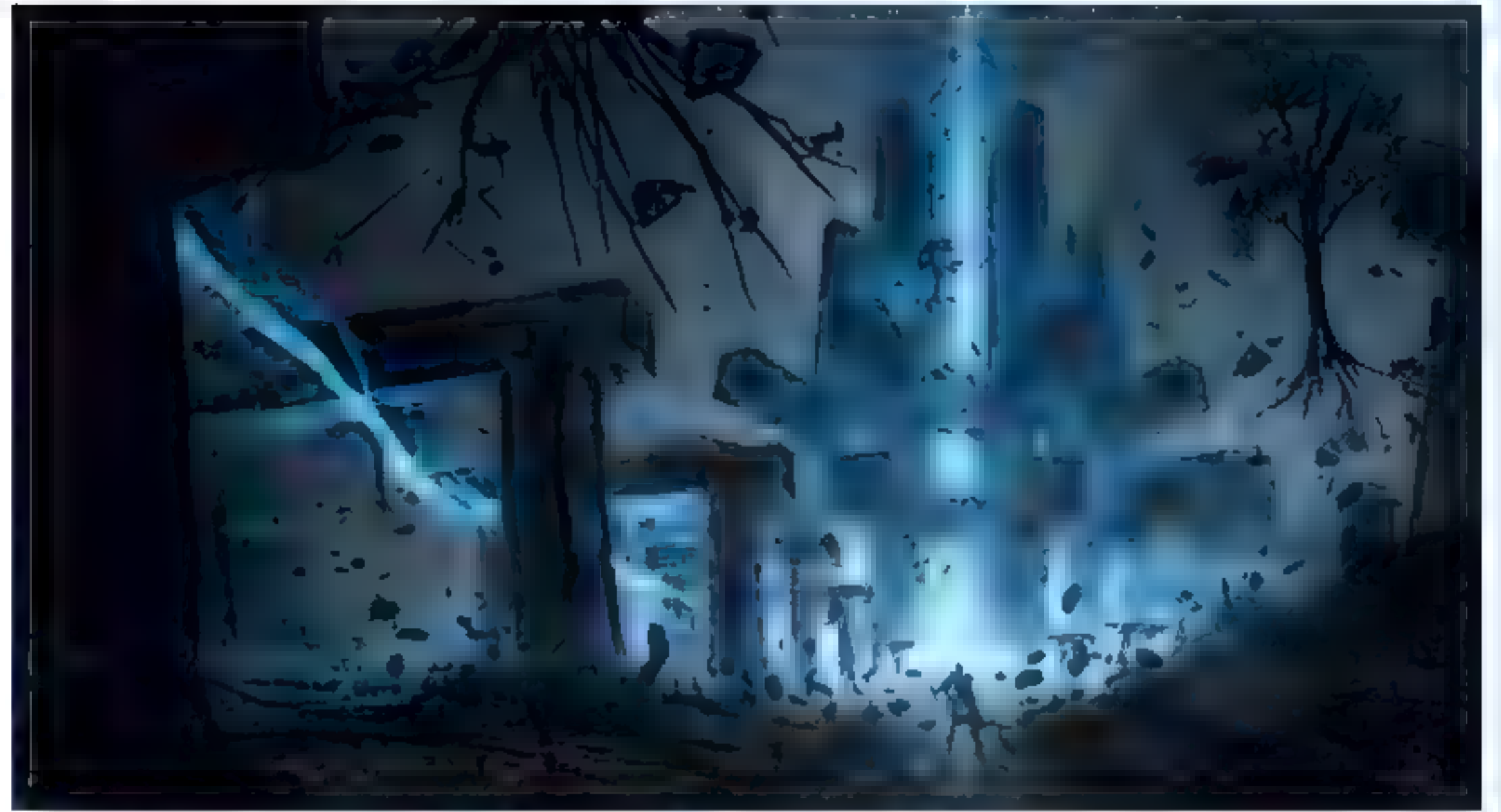
While the gameplay of *Shadow Realms* was focused on asymmetrical multiplayer, much of the game's story would have taken place in portions played solo. Players would have been given the opportunity to define their characters in the world in typical BioWare fashion. There were even romances planned. The game's content would have been delivered episodically, almost like a television show, much like similar plans for another canceled project, *Agent*.

STOP LOOKING WHERE YOU CAN'T  
FIND ME.







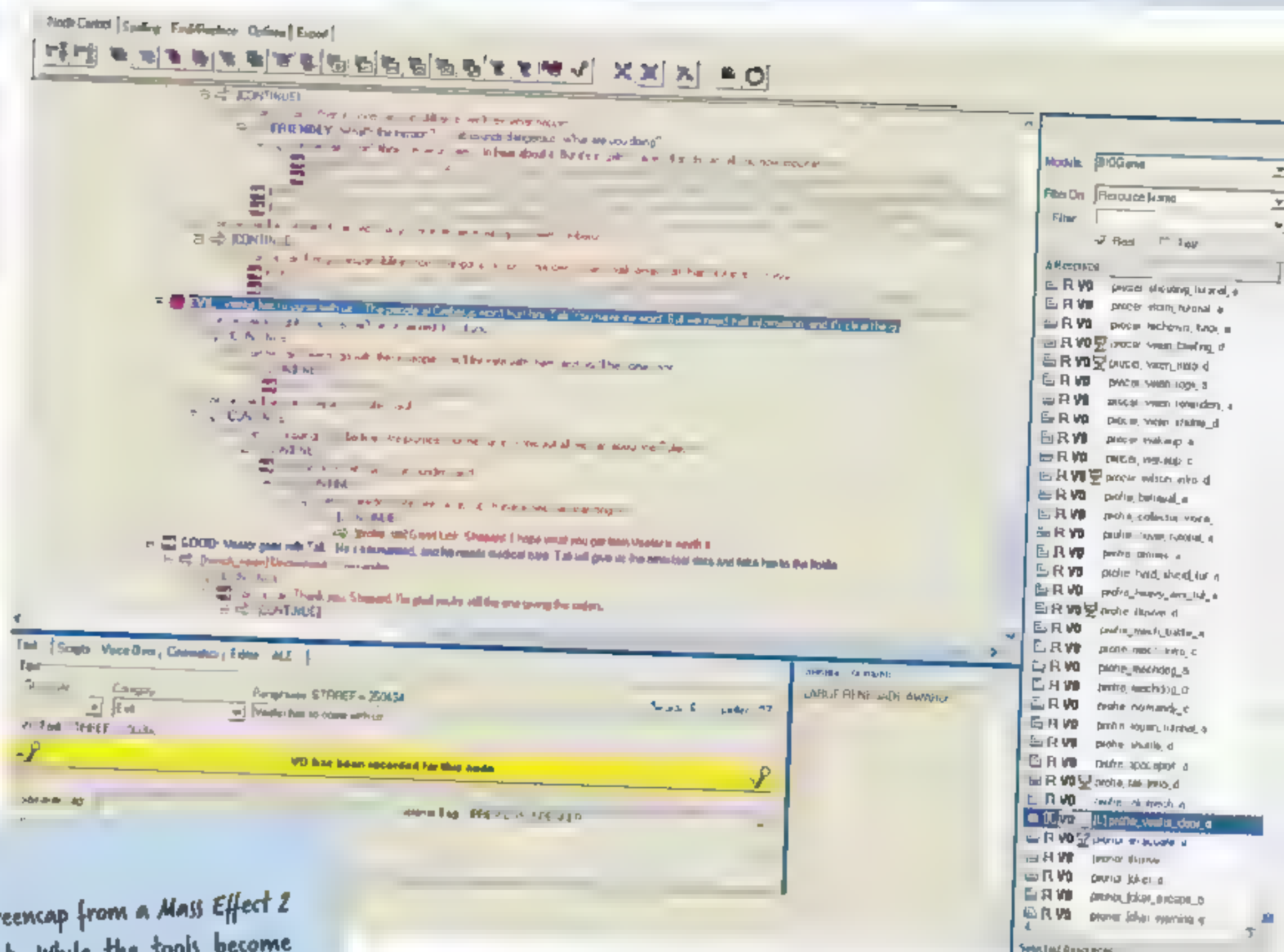




## HOW TO READ A TOOL SET

AN INCREASING AND SUSTAINED emphasis on branching dialogue has seen BioWare develop and refine a unique scriptwriting tool for use in their games. The tool has found a home in multiple engines, from Infinity and Unreal to Frostbite, and its functionality has improved with each release. Features include:

- Nested player choices
- Collapsible waterfall structure
- Variant fall-through branches based on variables
- Linkbacks to bridge content as branches split and converge
- Detailed line-by-line data including player character options and line delivery volume and intensity
- Space for editor notes, voice-over direction, and situation synopsis



A screenshot from a *Mass Effect 2* script. While the tools become more sophisticated with each project, similar methods of branching and linking lines are still used in newer releases.

## EDMONTON IS VOELD

COLD MAKES BIOWARE STRONGER

THE TEMPERATURE IN Edmonton when *Mass Effect 2* launched on January 26, 2010, was  $-19^{\circ}\text{C}$  ( $-2^{\circ}\text{F}$ )—otherwise known as a typical day in January for the northern Canadian city.

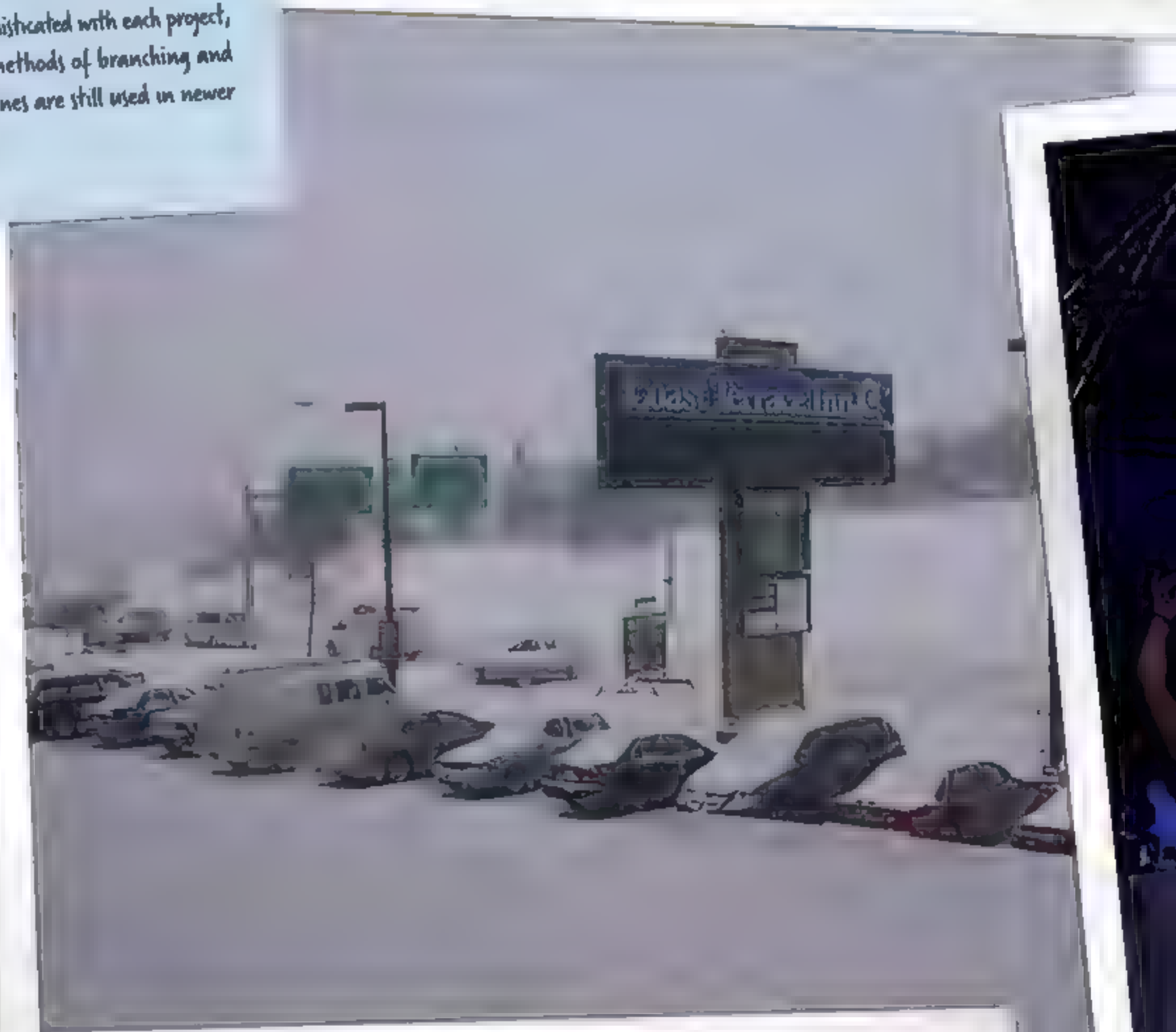
New hires at BioWare Edmonton are issued BioWare-branded tuques\* on their first day.

It's not quite Voeld cold; the ice planet in *Mass Effect: Andromeda* got down to  $-52.25^{\circ}\text{C}$ , while Edmonton's record is a balmy  $-49.4^{\circ}\text{C}$ . But there's no better analog for Edmonton in *Mass Effect* than a frigid, isolated outpost where being outside for even a few moments could kill you.

Many at BioWare argue that Edmonton's climate and geography are actually strengths.

"The way the studio there is kind of isolated, and the winters in Edmonton and everything, make for a situation where there's this hotbox of creativity and the hardest-core gamers you can imagine all in this weird, lonely island in the middle of the icy desert," former BioWare audio designer Joel Green says. "In those long winters, there isn't much else to do other than imagine and create things."

\*Knitted caps, for readers outside Canada.







## REAL TALES OF DEVELOPMENT: **SOME DORK FROM EDMONTON ON AN AIRCRAFT CARRIER**

**PARTIES AT SAN DIEGO COMIC-CON** tend to range from hotel-lobby ragers to once-in-a-lifetime, how-is-this-real spectacles. William Shatner's 2010 party was in the latter camp. It was held on a decommissioned aircraft carrier docked in San Diego's harbor.

As is often the case with parties on decommissioned aircraft carriers hosted by William Shatner, the guest list was pretty exclusive. Somehow, EA's marketing manager for *Dragon Age* got tickets. He brought a bunch of *Dragon Age* developers with him, including then *Dragon Age* editor Dan Lazin:

*I'm standing near the entry gate, which is just a couple of velvet ropes because it's an aircraft carrier, so there's no real door. David Hasselhoff walks up with a young woman on either arm.*

*And the bouncer turns David Hasselhoff away because he's not on the guest list.*

*So here I am inside this party that I, some dork from Edmonton, would never imagine that I'd get into, watching David Hasselhoff get turned away because he doesn't know some guy in marketing at Electronic Arts.*



## HOLIDAY PARTY FAVORS

**BIOWARE IS KNOWN FOR** throwing a heck of a party, especially around the holidays. Here are just a few of the wild activities from past holiday parties:

- Fortunetellers
- Candy Bar (as in a bar that serves candy)
- Ski Shots
- Poker Tournaments
- Aerialists Pouring Champagne
- Oxygen Station
- Live Painting of BioWare Characters
- A Host Dressed Like the Mad Hatter (that one was actually kinda scary)



## NUG PLUSHES, N7 HOODIES, AND BODY PILLOWS . . .

BIOWARE WORKS WITH licensing partners to create a wide assortment of collectibles. Some of it is typical video game merch, like clothing and figures. Other products, like remote-control vehicles, laser-cut metal model kits, and even a Garrus body pillow, intentionally break the mold.

While fan-favorite items like N7 hoodies are pillars of BioWare's tie-in catalog, often the weirder and more specific the item, the louder it resonates with fans.

"A lot of the unique things start with us asking ourselves: Wouldn't it be cool if we did this?" manager of consumer products Devon Gardner says. "And then we actually do it."

Senior writer Luke Kristjanson customized an official Sanshee nug, using antlers from a Rudolph the Red-Nosed Reindeer plush. Luke called this creature the nuggalope, a play on the mythical horned rabbit known as the jackalope. There are conflicting reports on the origin of the nuggalope's beefier cousin, the battle nug Senior director of business

operations Chris Bain championed the idea of a nug mount in *Inquisition*. The end result was written into the game by Luke, though, and the similarities between the two nug variants are obvious. Regardless, Luke also crafted a little saddle for his nuggalope so action figures could ride it in the office.



## NOVELS, COMICS, AND ANIME . . .

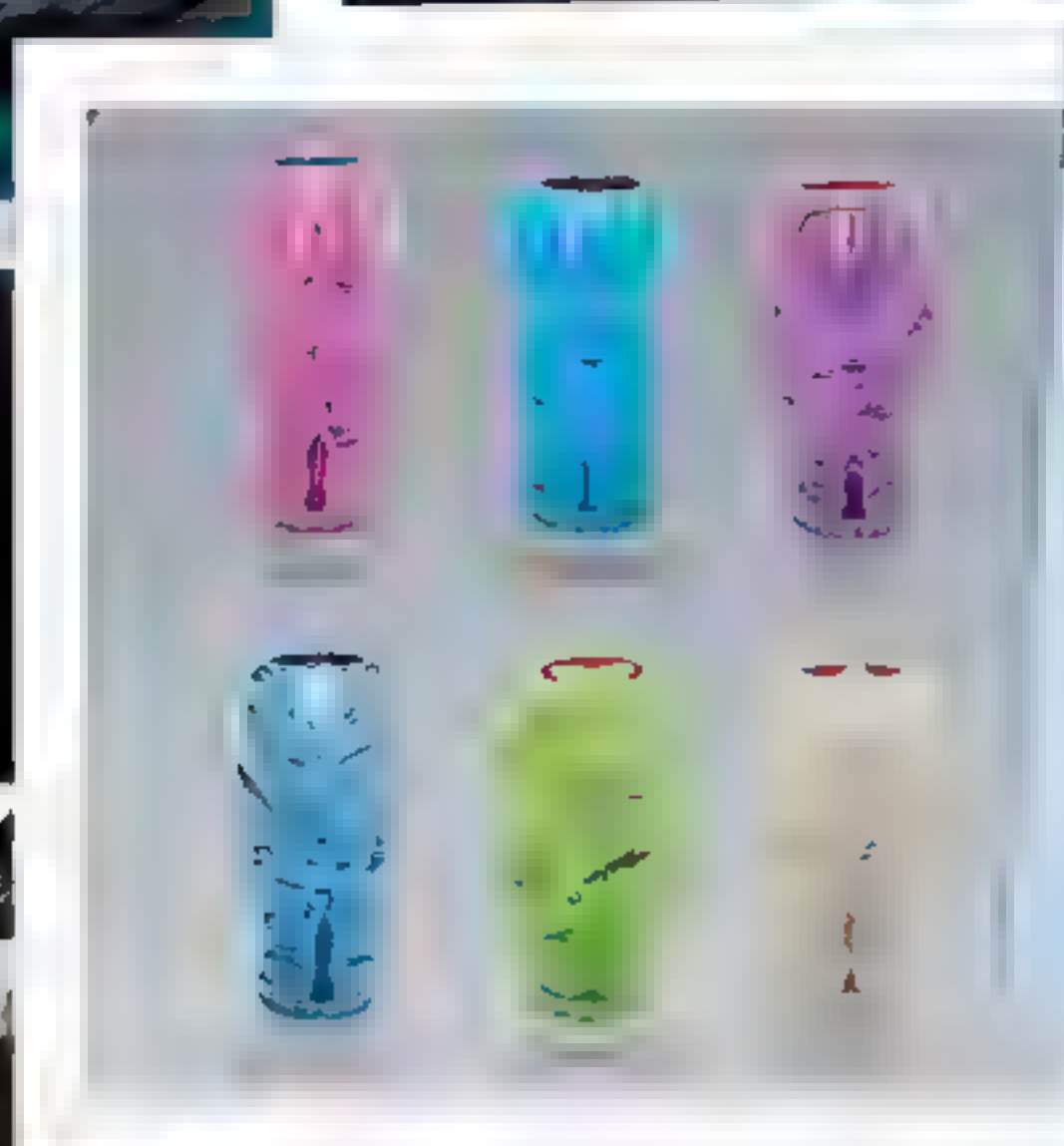
THE WORLDS OF BioWare games have grown far beyond the games themselves. BioWare has released novels, comics, short stories, and even feature-length anime, giving fans of sprawling series like *Dragon Age* and *Mass Effect* even more characters to meet and stories to experience.

Some are written by BioWare staff, while others are in partnership with outside creators eager to dive in and put their own mark on the lore.

"We try our best to be as authentic to our game worlds as possible and tell the best stories we can for each medium. We don't want fans to have to wait so long between games to get some more story," says Chris Bain, senior director of business operations, who has worked as a producer and editor on many of these titles. "It's very rewarding when we get to build onto the lore and love of our favorite characters."







Among the products BioWare has officially released over the years are Andromeda-themed tiki mugs, a remote-control Nomad, Mass Effect thumb drives, and a collector's edition of Dragon Age: Inquisition that included a war table map with hefty decorative markers, orlesian coins, and a lockpick kit that for legal purposes isn't a lockpick kit.

Also, a Garrus body pillow. The pillow began as an April Fools' joke, but was put into production after the demand for the item proved anything but a joke.





## CHARTING A NEW COURSE FOR MASS EFFECT



### KEY FACTS MASS EFFECT: ANDROMEDA

#### RELEASE DATE:

March 21, 2017

#### GENRE:

Action RPG

#### PLATFORMS:

Xbox One, PlayStation 4,  
Windows

Developed in Montreal,  
Edmonton, and Austin  
Published by Electronic Arts

IT TOOK A NEW TEAM to take *Mass Effect* beyond the Milky Way in *Mass Effect: Andromeda*. Led by BioWare Montreal, the ambitious project introduced players to a new protagonist: a Pathfinder named Ryder who was tasked with locating habitable "golden worlds" in the Andromeda Galaxy. Massive transport ships called arks populated with salarians, turians, asari, humans, and quarians made the risky jump to the galaxy's Heleus Cluster, fleeing a mounting Reaper threat between *Mass Effect 2* and *Mass Effect 3* as members of the Andromeda Initiative.

The distance between galaxies meant it was a one-way trip. The Initiative reached Andromeda in 2819, more than six hundred years after the events of *Mass Effect 3*.

#### THE FAMILY THAT RELAYS TOGETHER STAYS TOGETHER

While BioWare studios in Edmonton, Montreal, and Austin had previously collaborated on other projects, *Andromeda* was the first game that BioWare truly codeveloped across three studios.

The bulk of the game work, especially in the early days of development, was done at BioWare Montreal, a studio composed of a handful of BioWare Edmonton expats and heaps of experienced developers who joined the studio from elsewhere specifically to bring a new *Mass Effect* experience to life. Series veterans in Edmonton then came on to contribute writing, cinematics, design, and quality assurance, along with leadership from creative

director Mac Walters and the core Production team. BioWare Austin writers and level designers also joined the fray.

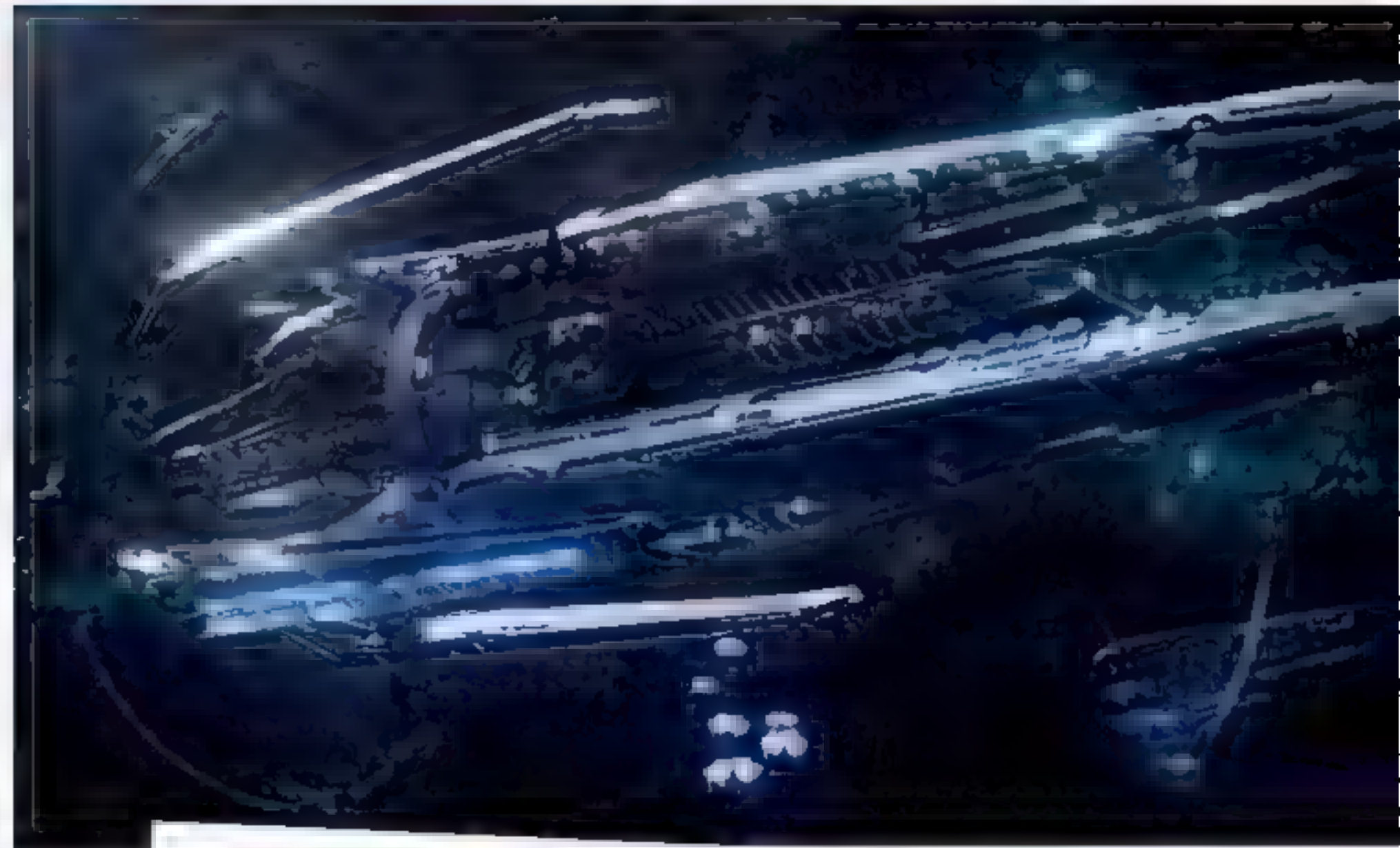
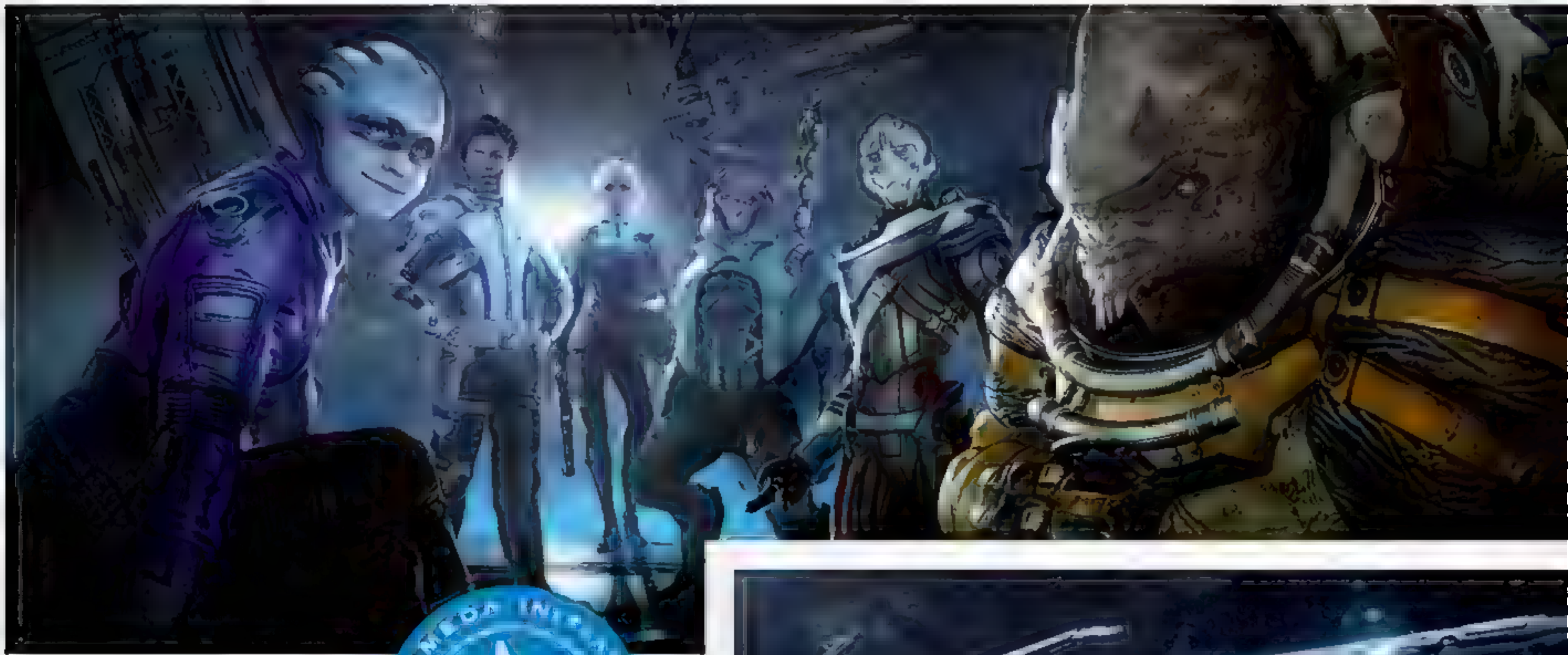
"A lot of people in Montreal joined BioWare as fans of the franchise, so they just had this passion, and it felt like it was more like the days of *Jade Empire*, where a smaller team, a younger team, gets to do something new for the first time," Mac says. "Even though it wasn't necessarily a new IP for me, it felt fresh and it felt new because of that. The team was just super excited to be working on it."

#### EXPLORING OPEN WORLDS

Early plans for *Andromeda* saw players exploring hundreds of worlds. Planets would be procedurally generated, allowing for a near infinite variety of experiences. But as development wore on, it became clear that the game narrative required more specific, hand-touched level design on each world to keep the experience engaging and the story focused.

One challenge of *Andromeda* was defining what *Mass Effect* meant without Commander Shepard. Care was given to include many of the trilogy's key species. Ryder recruited krogan, turian, asari, and salarian followers. Ryder was also human, and like Shepard, represented humanity's hope for a peaceful coexistence among aliens who had long operated without human contact. *Andromeda* added new alien species: the angara and kett, the latter a threat to peace in the galaxy.

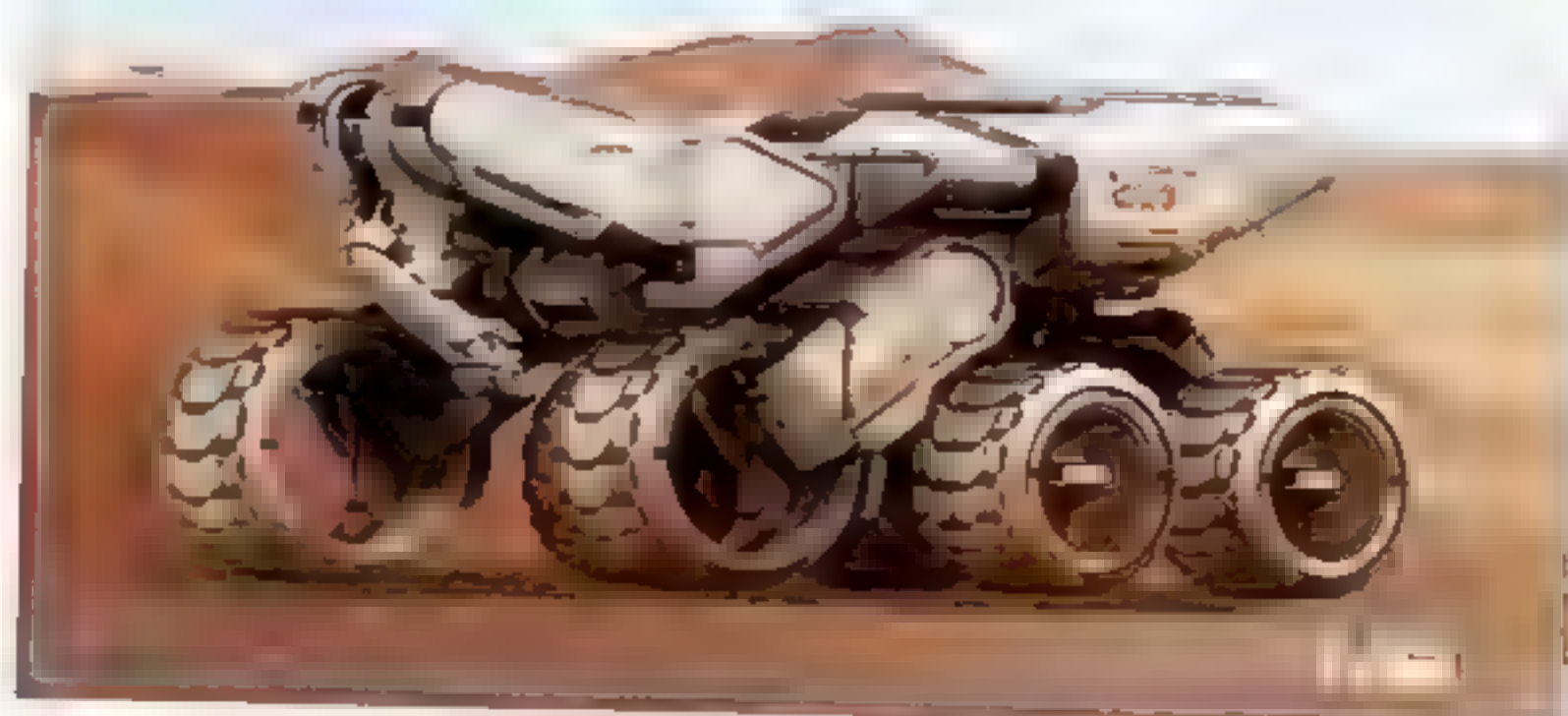
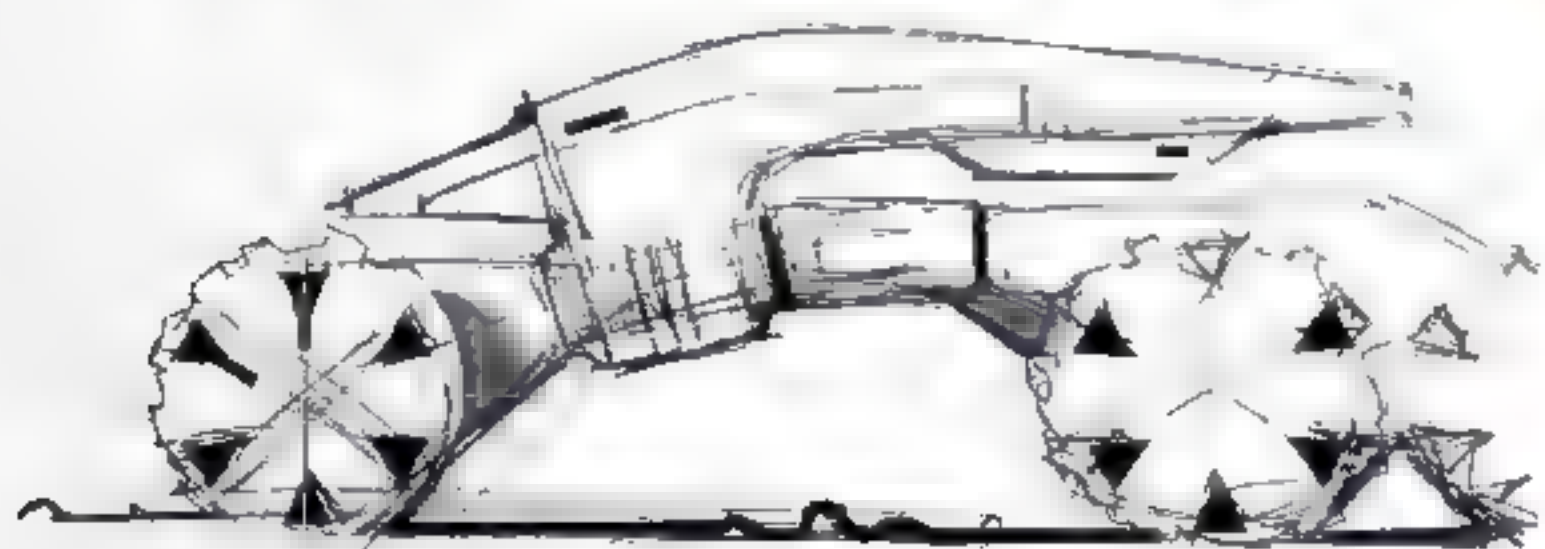
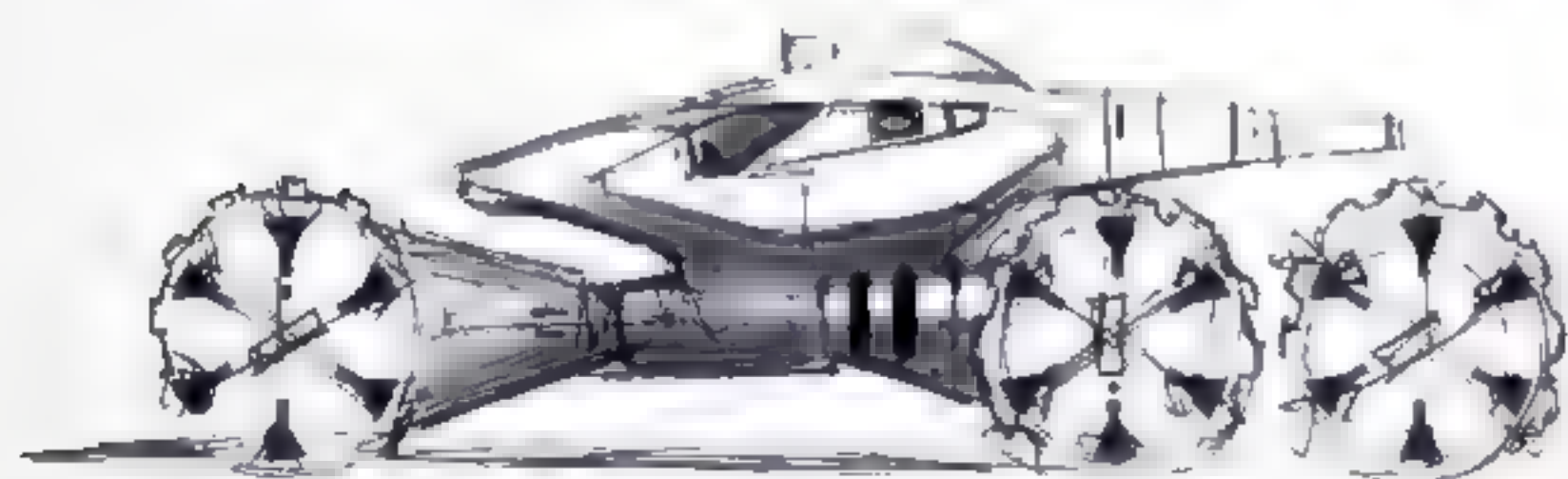
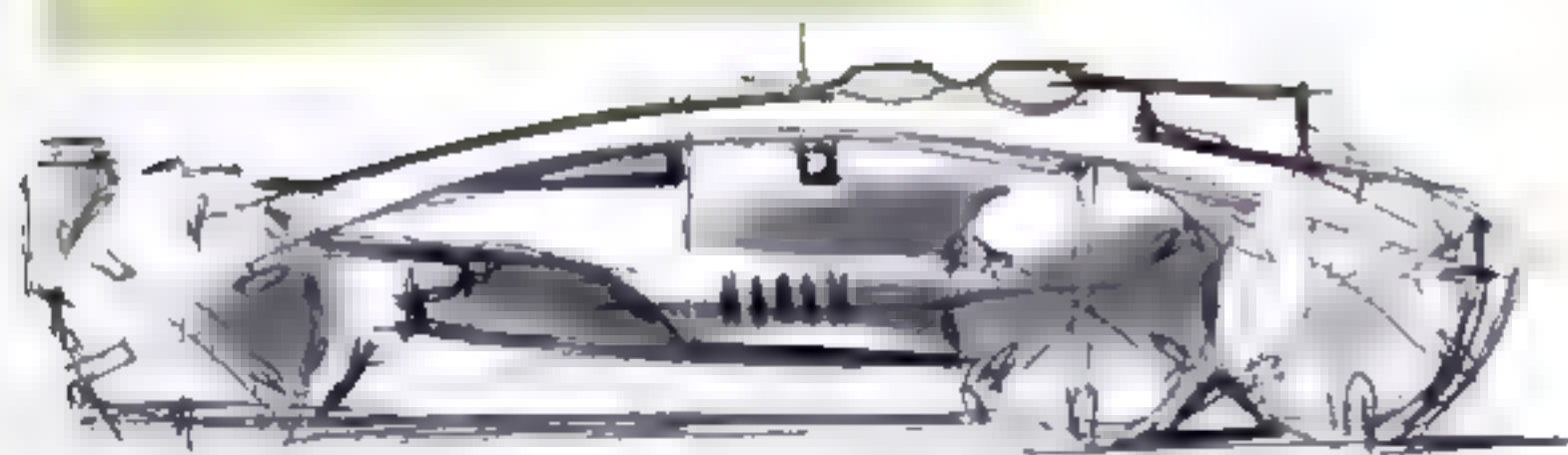




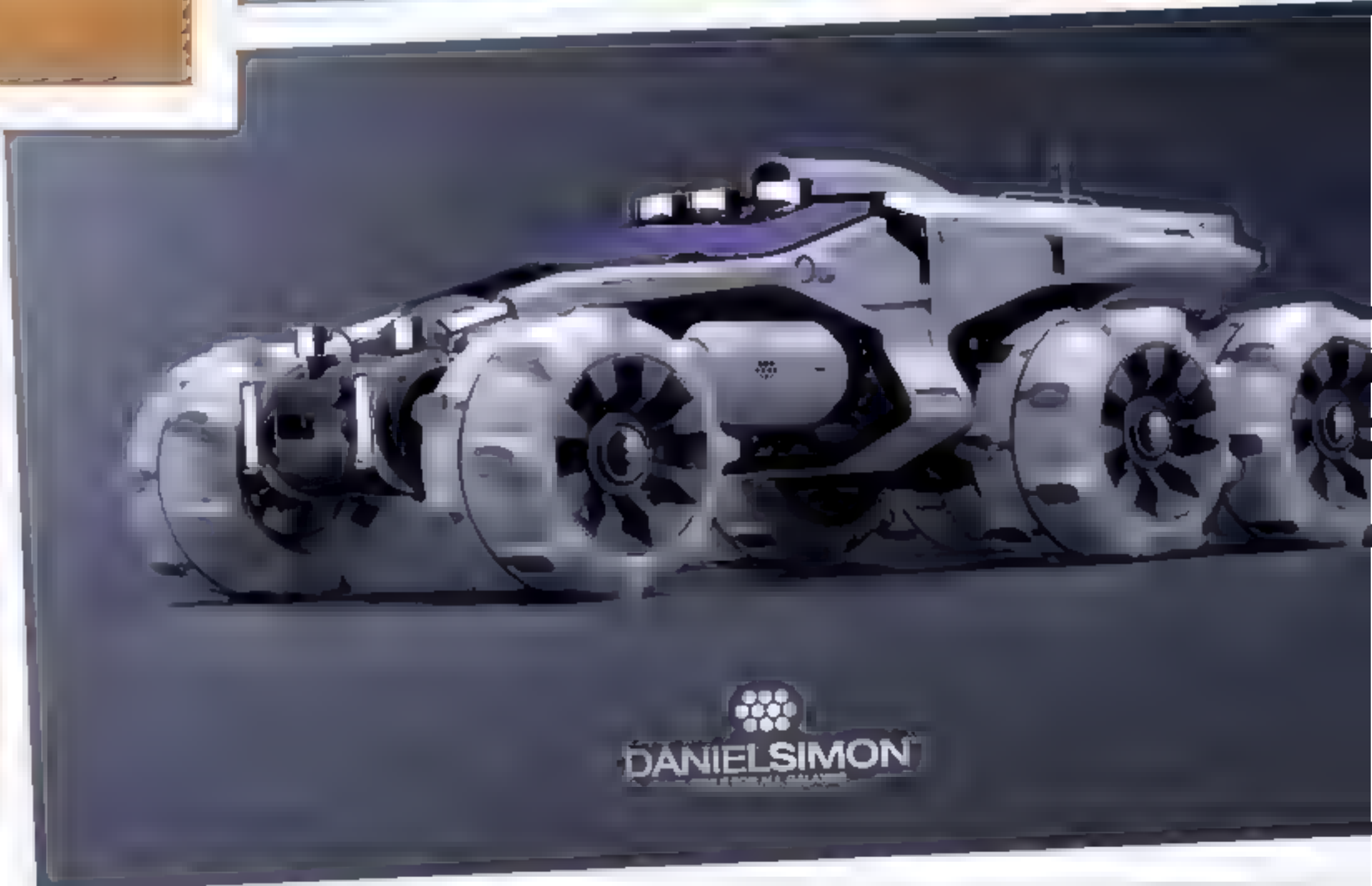
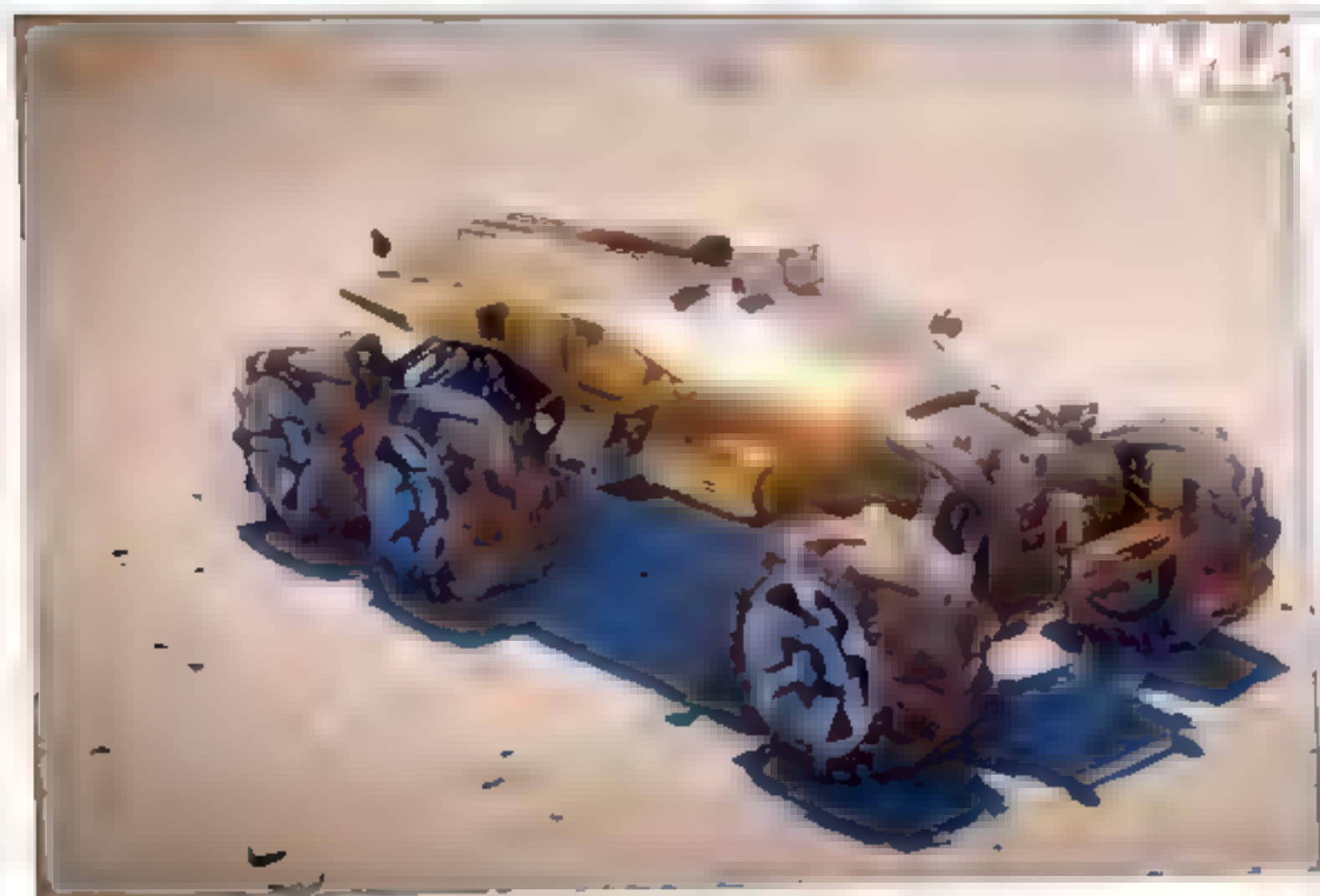
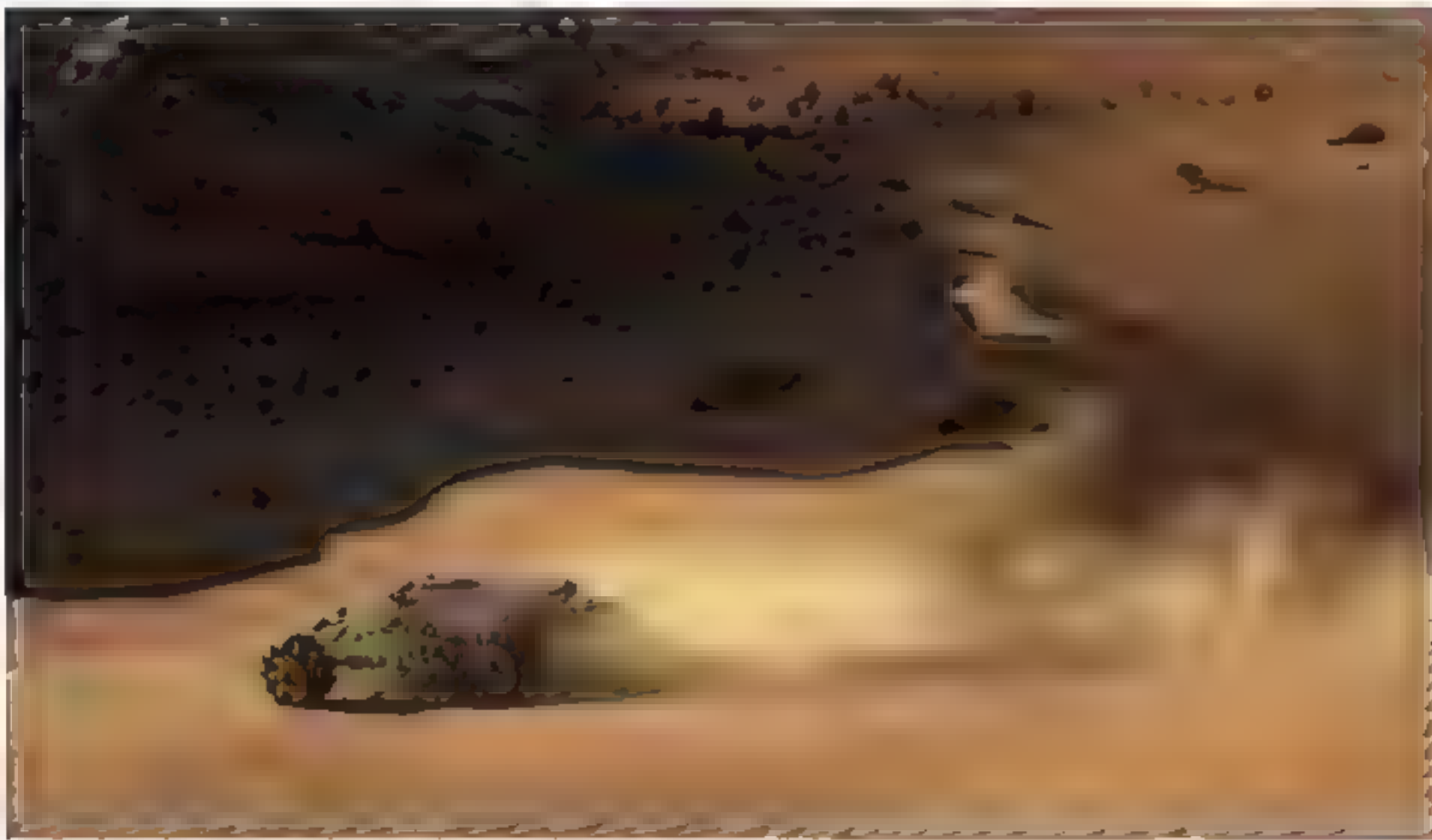
By creating a new *Mass Effect* story in a new galaxy, the team was challenged to put their own visual stamp on the game while keeping it true to the franchise. Being the first *Mass Effect* game on a new generation of consoles meant far more detail.



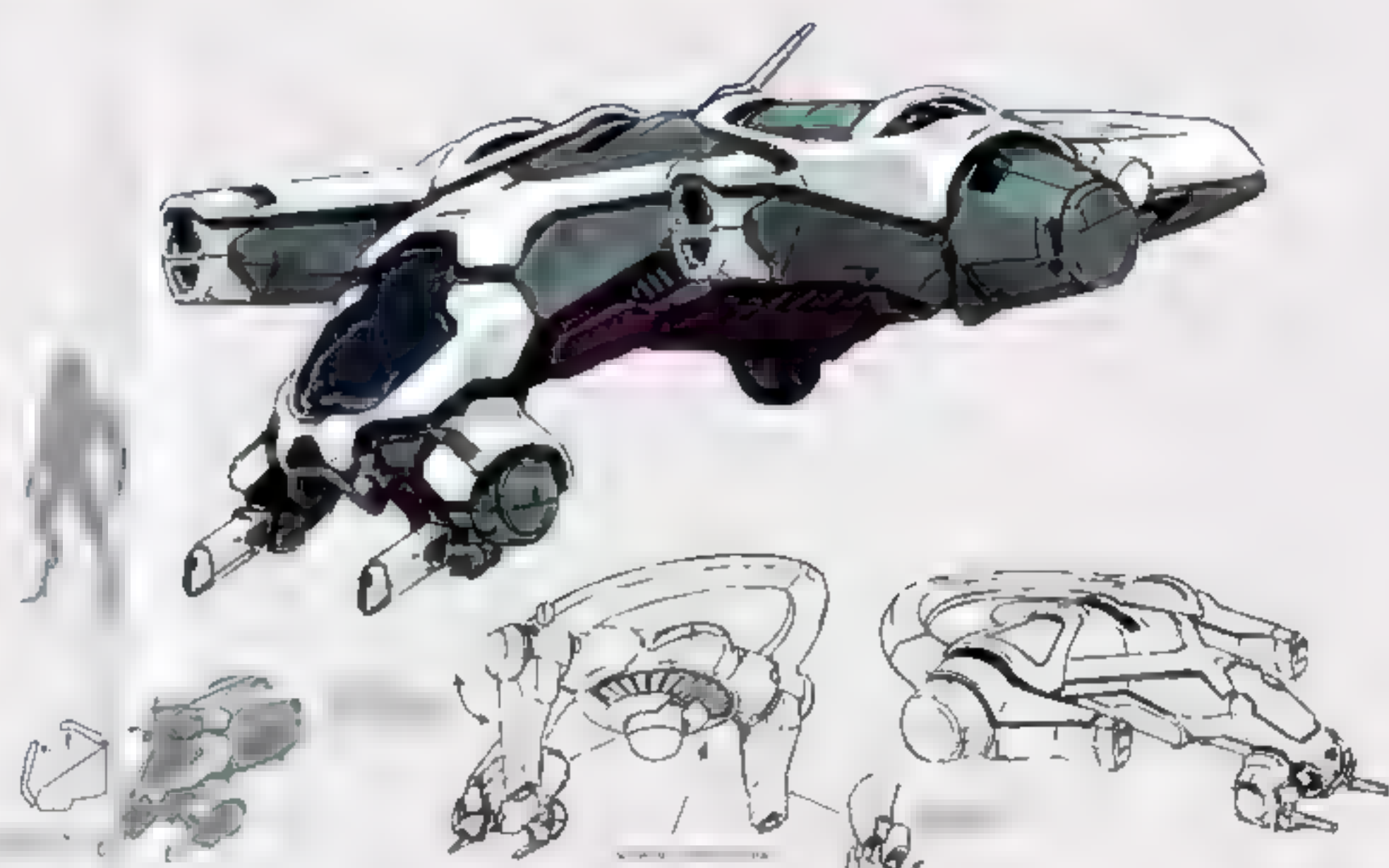
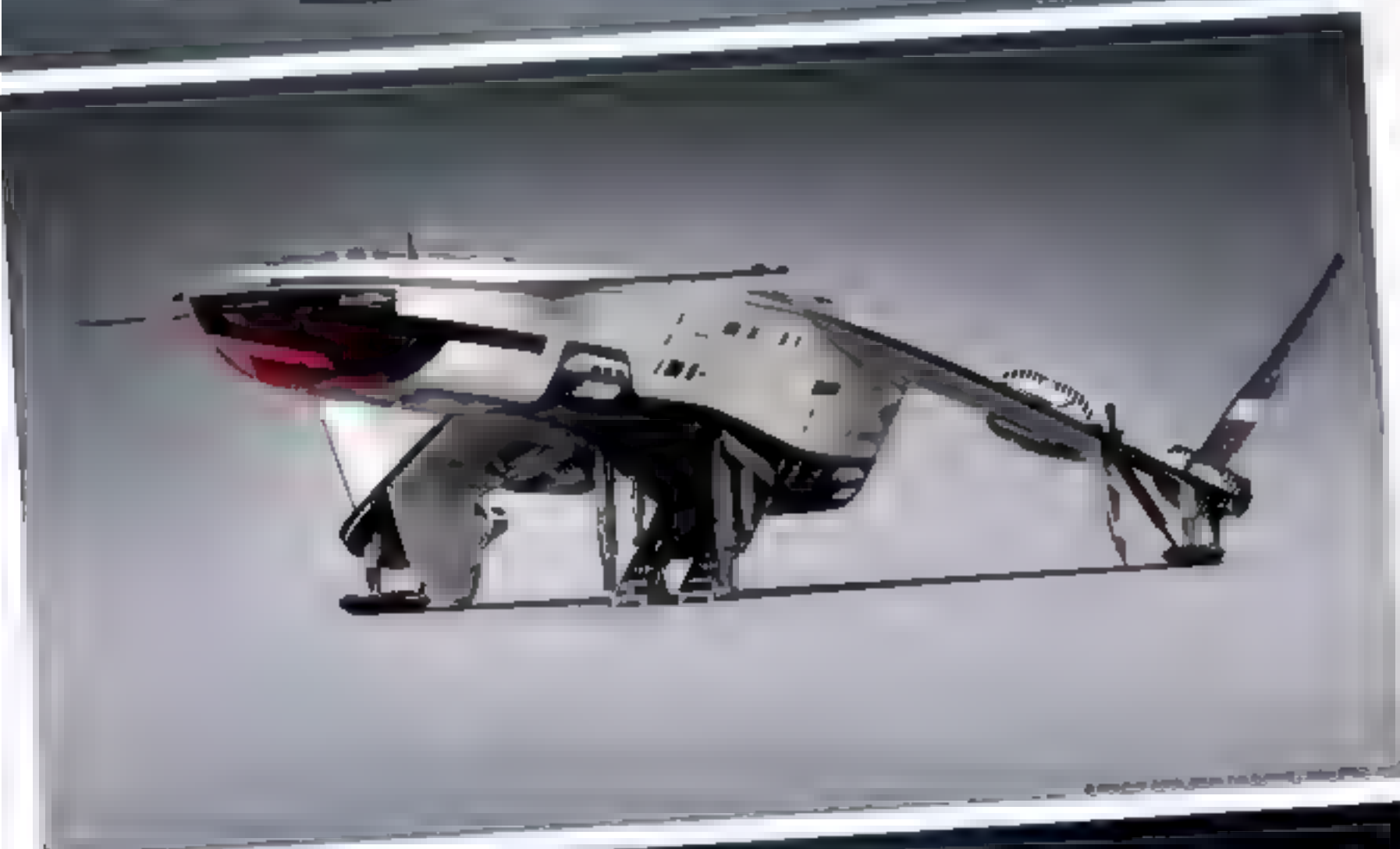
Beginning with *Andromeda*, the team decided that with few exceptions vehicles in *Mass Effect* have six wheels. Early Nomad concepts were bulkier, with later iterations focusing on the rover's ability to move over its ability to protect itself from hostile fire, underlining themes of exploration in the game.



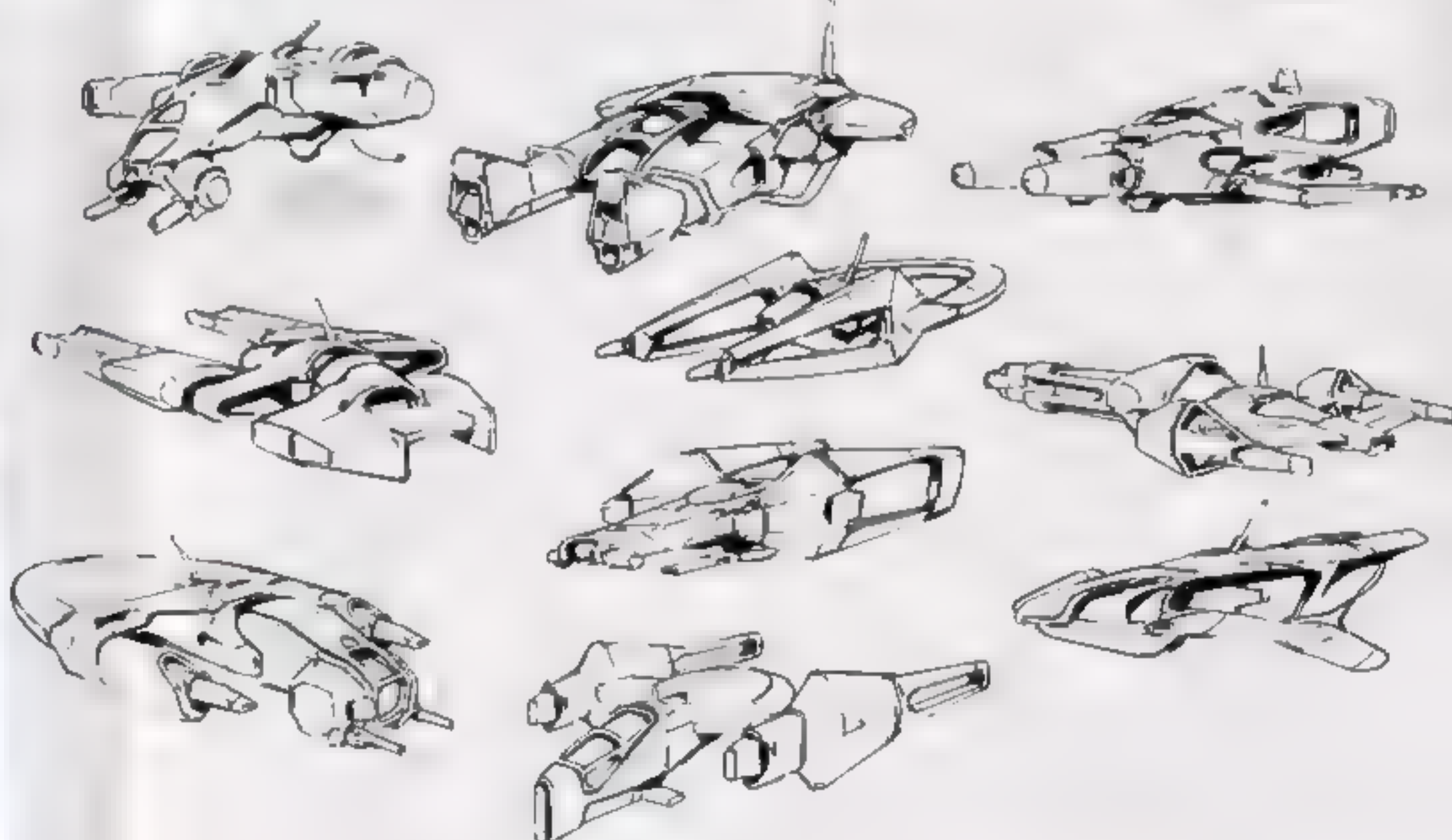








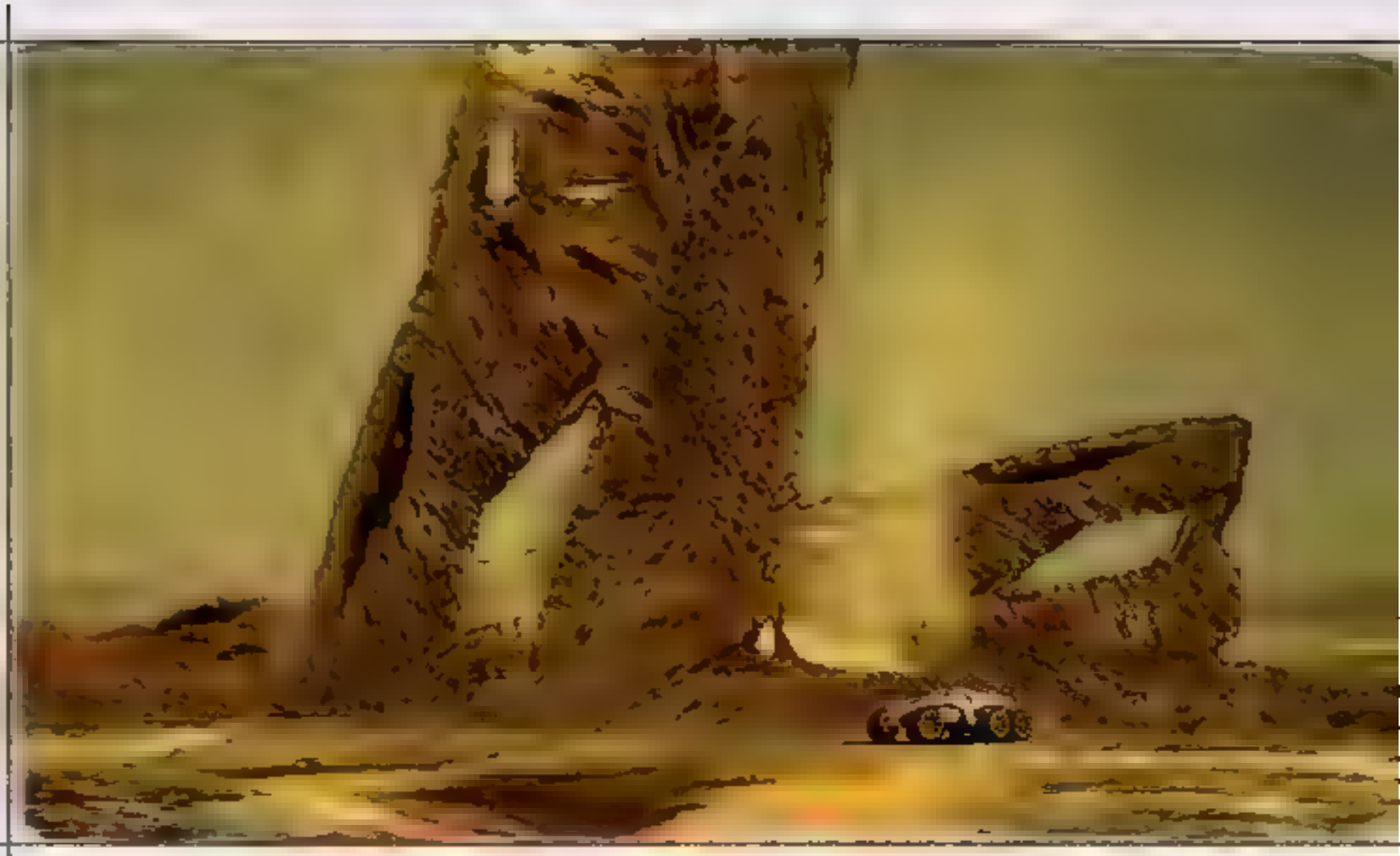
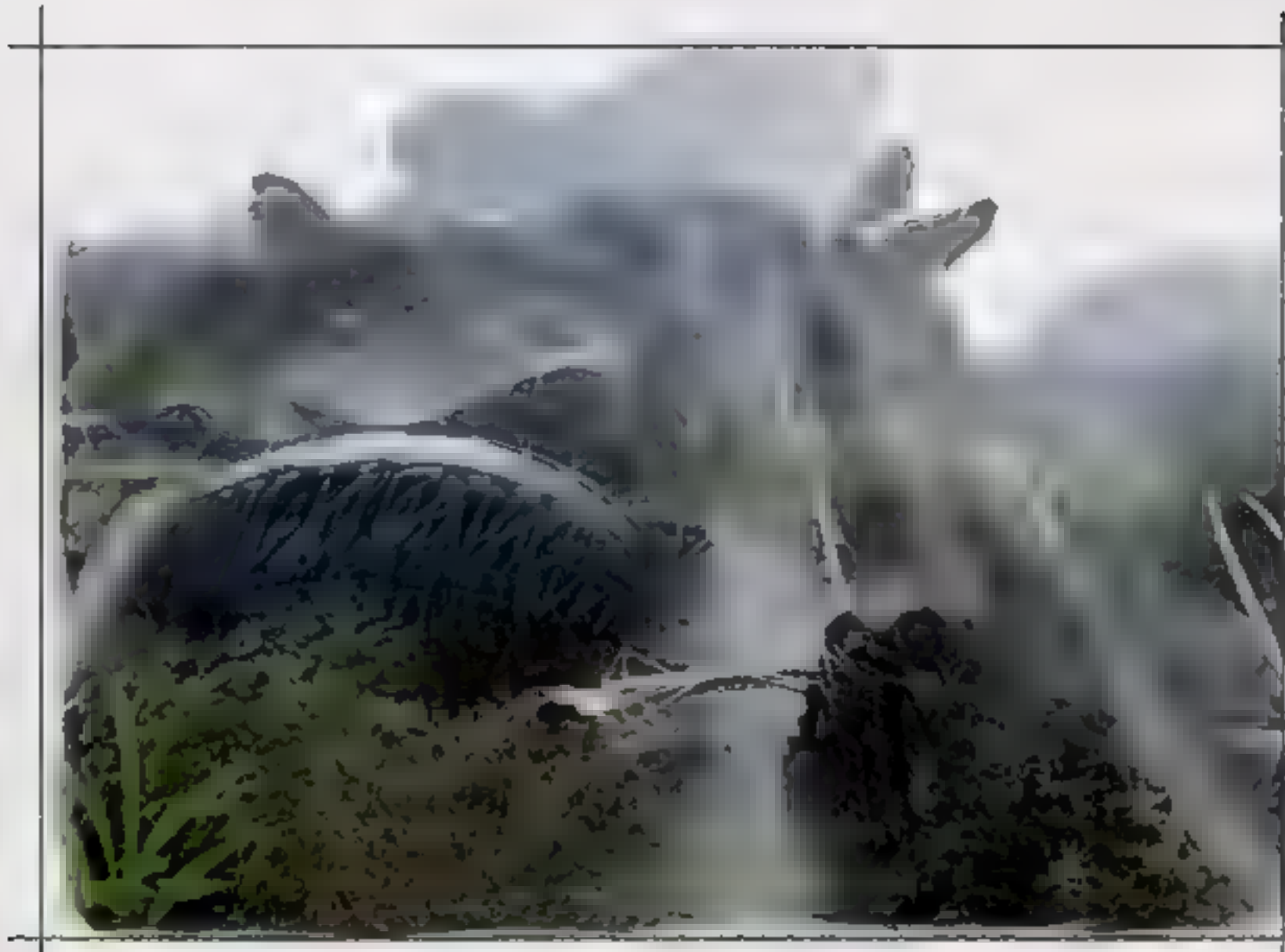
AN JAHN FIGHTER



German concept designer and automotive futurist Daniel Simon was contracted to create Andromeda's signature Tempest ship and Nomad rover. A wide variety of ship styles were flown. The finalized Tempest's design took inspiration from the real-world Concorde commercial airplane.







During the early stages of *Andromeda*, the plan was to give players numerous uncharted worlds to explore. Designers worked hard to come up with procedural elements that would make each planet special. Eventually, the team made the difficult decision to abandon the procedural planets in favor of more memorable hand-touched alien worlds, each with a specific story to tell.







## BIOWARE SERVICE AWARDS

**LONG-SERVING BIOWARE DEVELOPERS** are recognized with handsome, heavy statues of iconic game characters. The awards, which stand about the height of a common Chihuahua, are given out for every five-year period a developer has worked at BioWare, with different characters signifying each milestone.

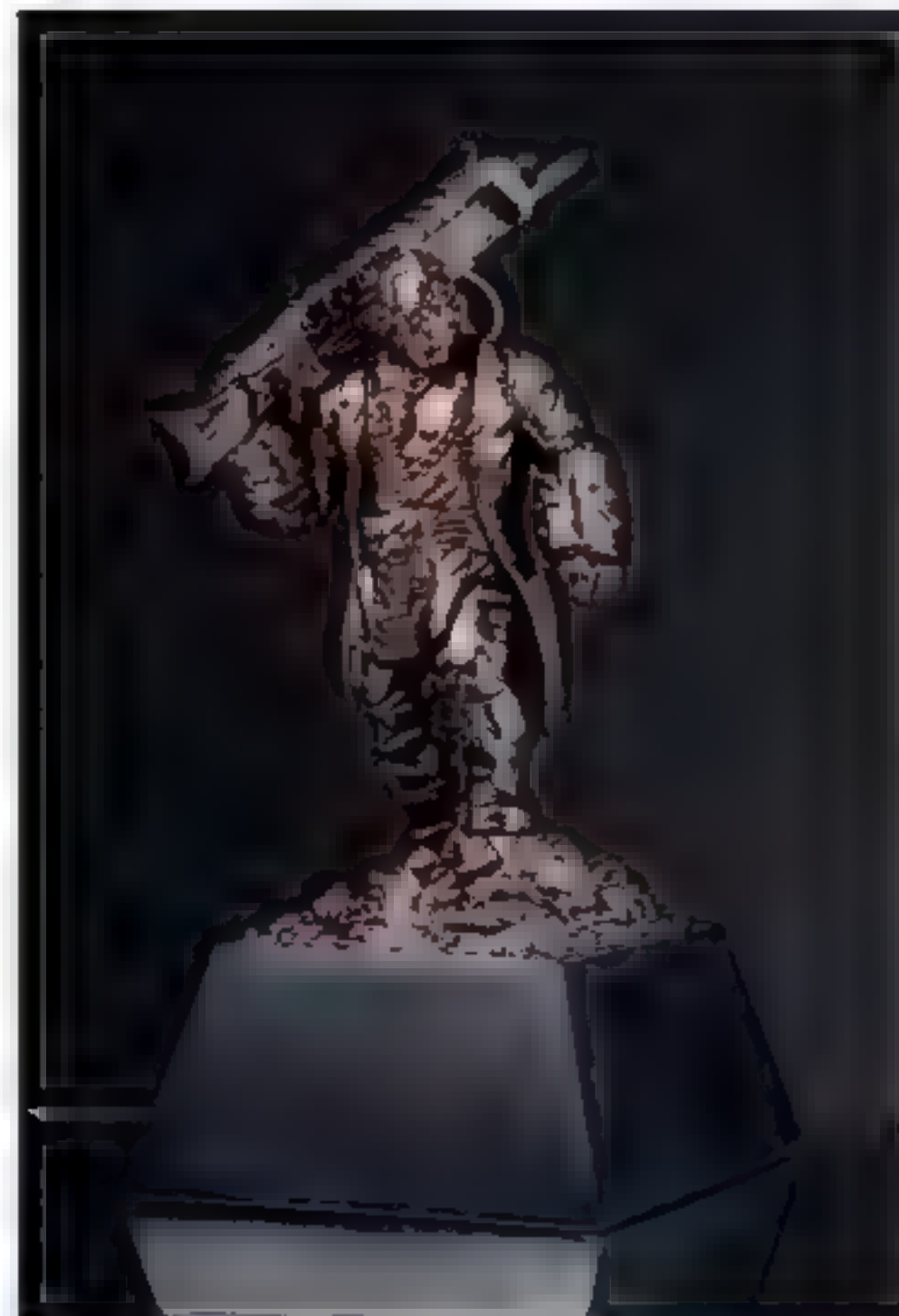
**Five-Year Award:** Varric, the iconic *Dragon Age* dwarf, with his trusty crossbow Bianca.

**Ten-Year Award:** Krogan warlord Wrex, from the *Mass Effect* trilogy, in an action pose with a Graal Spike Thrower shotgun.

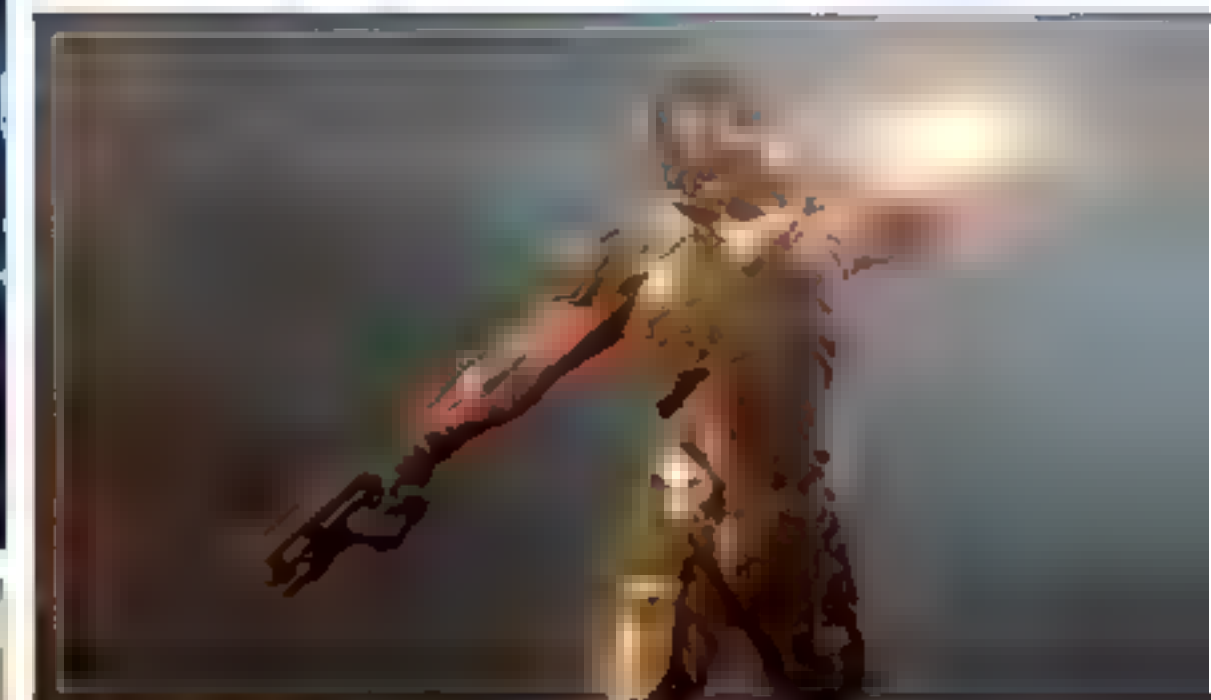
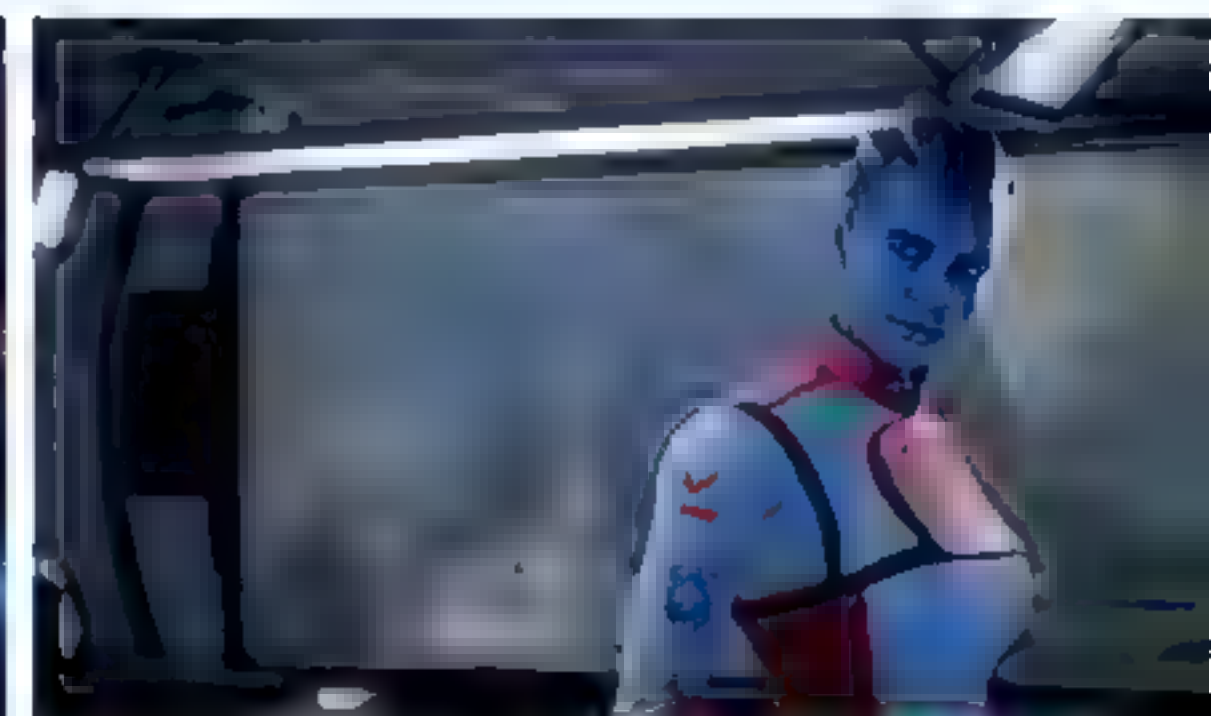
**Fifteen-Year Award:** Female Commander Shepard, known to most *Mass Effect* players as FemShep, with an M-8 Avenger.

**Twenty-Year Award:** A high dragon from *Dragon Age*, roaring and perched upon a rock.

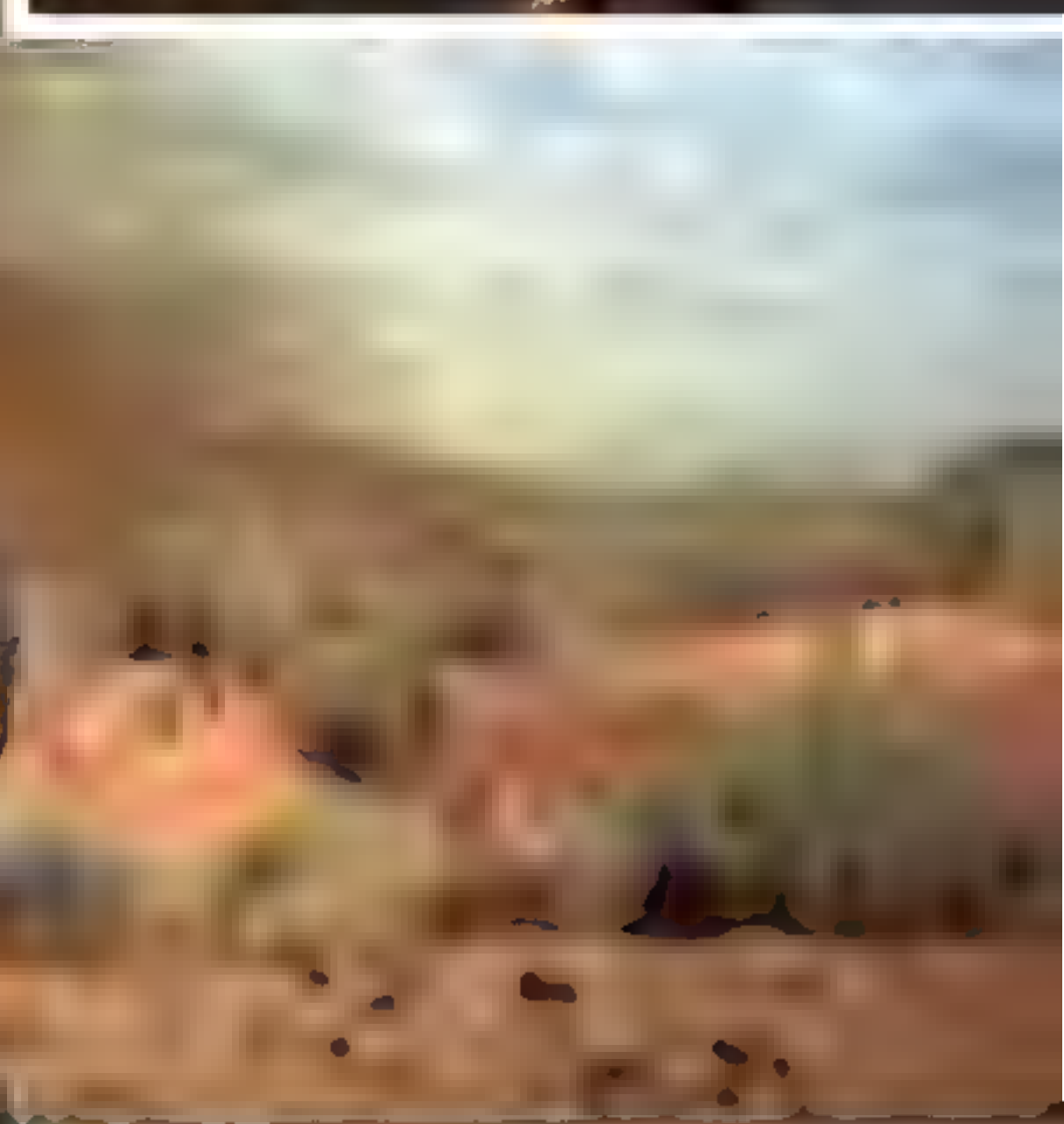
**Twenty-Five-Year Award:** At the time of printing, some developers are nearing the twenty-five-year milestone. It remains to be seen what character will properly represent a quarter century of service to BioWare. A Citadel keeper, maybe?







MASS EFFECT ANDROMEDA WAS THE FIRST  
MASS EFFECT GAME TO BE RELEASED ON  
CONSOLE. THE FIRST WAS MASS EFFECT  
ON THE PS3. THE SECOND WAS MASS  
EFFECT 2 ON THE PS3. THE THIRD WAS  
MASS EFFECT 3 ON THE PS3. THE FOURTH  
WAS MASS EFFECT ANDROMEDA ON THE  
PS4. THE FIFTH WAS MASS EFFECT  
ANDROMEDA ON THE PS5. THE SIXTH  
WAS MASS EFFECT ANDROMEDA ON THE  
XBOX ONE. THE SEVENTH WAS MASS  
EFFECT ANDROMEDA ON THE XBOX SERIES X.



## REAL TALES OF DEVELOPMENT: MORDIN'S CUT CAMEO IN ANDROMEDA

**JUST AS SHEPARD MUST DECIDE** who lives and who dies in *Mass Effect*, game developers must decide what content lives and what content dies as games near their deadlines.

Despite being set a galaxy away and some six hundred years after Mordin's death, there was a time when the *Normandy's* salarian doctor had a cameo in *Mass Effect: Andromeda*.

Mordin's unlikely appearance wasn't cut because the team ran out of time, though. It was the drug references. Writer John Dombrow explains:

*One day, I had to write a small quest for Kadara. I thought it would be amusing if these two guys living in a shack way out on the fringes were growing plants for, uh, "medicinal purposes" and needed Ryder's help with it.*

*It occurred to me: Wouldn't it be amusing if Ryder had the option of actually trying the "medicine" to see what would happen? And, I thought, what if it turned into some amusing hallucination that somehow involved SAM—like maybe SAM would sing?*

*But why? How could I motivate that?*

*Then it hit me. Who else in the Mass Effect games sings unexpectedly? MORDIN. Back in ME2, Patrick Weekes had given Mordin this great little quirk where he breaks into song.*

*So as a nod to our favorite salarian, I wrote SAM*

*singing Mordin's favorite tune, "Modern Major-General."*

*It got even better when our cine designer John Ebenger wanted to take it even further. Bless him, he came in on a Saturday to do a special hallucination scene showing Mordin himself.*

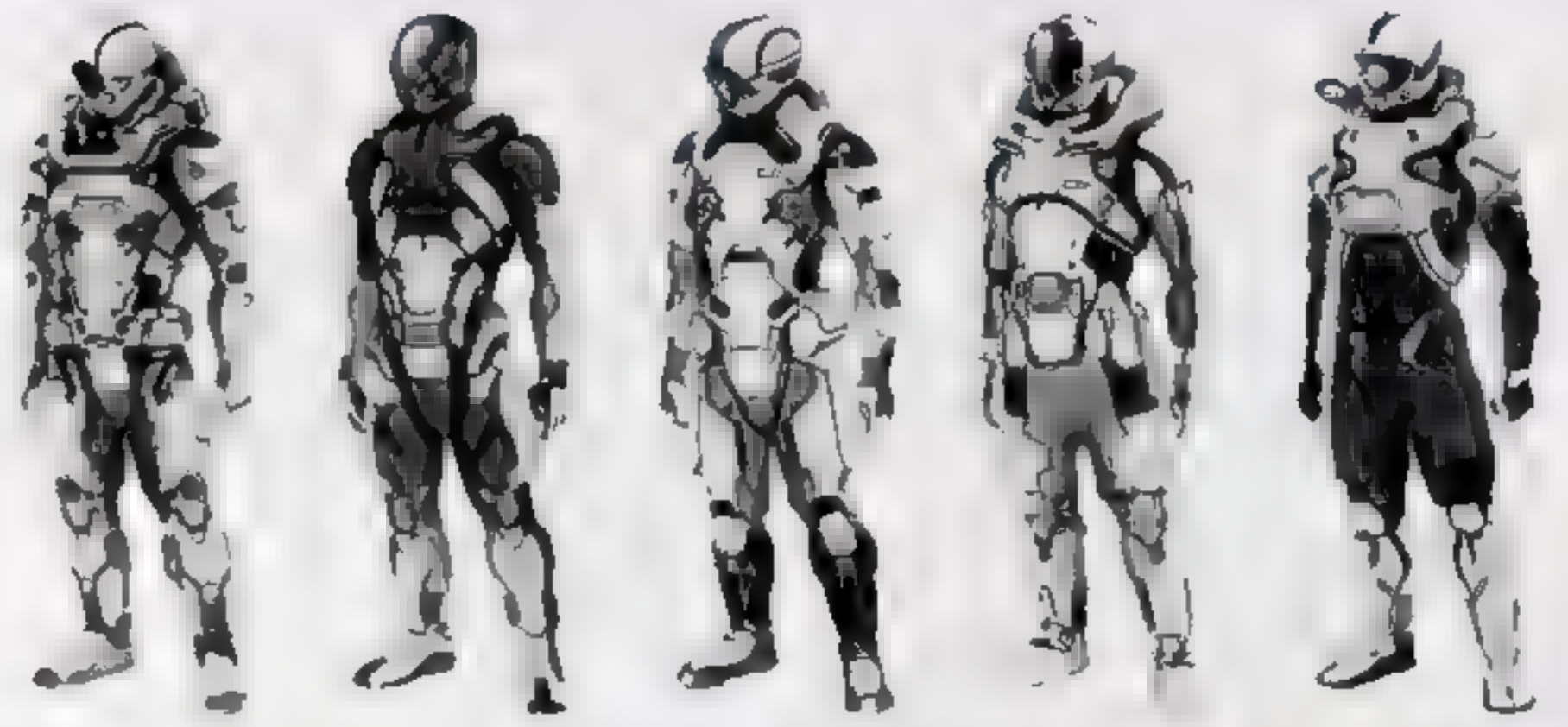
*It was great. Until the fateful day we were told MEA had already been submitted to the ratings board. That's when you declare things like drug use in your game. Mordin fell under that category. Which meant it was a no-go. We were too late.*











These drawings explore visual options for Andromeda's player character, the Pathfinder.

Shepard's signature dark-armor look in the *Mass Effect* trilogy was contrasted here with experiments with cloth, asymmetrical design elements, and white armor.







The new designs required for *Andromeda* needed to fit visually within the *Mass Effect* universe while still feeling a galaxy away. Though there are not too many exceptions, humanoid figures are the standard in *Mass Effect*, and this persisted in the fourth game.

Designers explored numerous ways (opposite) to create aliens who looked properly alien, with striking lines and textures, while still being able to show emotions instantly recognizable to human players.





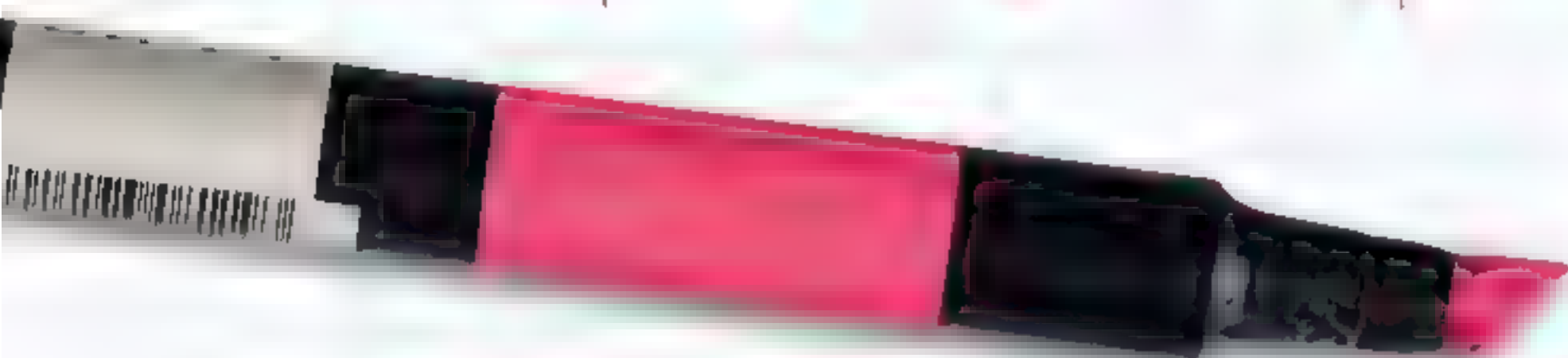






## THE MAKING OF

# ANTHEM



### BIOWARE CHARTS NEW TERRITORY



#### KEY FACTS ANTHEM

##### RELEASE DATE

February 22, 2019

##### GENRE:

Action RPG

##### PLATFORMS:

Xbox One, PlayStation 4,  
Windows

Developed in Edmonton  
and Austin

Published by Electronic Arts

AFTER THE RELEASE OF *Mass Effect 3* in 2012, executive producer Casey Hudson and a core team of developers that included design director Preston Watamaniuk and art director Derek Watts began brainstorming something new: an original IP, removed from *Dragon Age* and *Mass Effect*, that blended science fiction and fantasy in a world that grew and evolved online with a community of players.

The game would have an action focus and emphasize multiplayer gameplay. They sent out emails to the team asking broadly for any tenets they thought could help anchor these concepts.

"The starting point for *Anthem*—or *Dylan*, as it was known at the time—was in the idea that we wanted an IP that would be fully differentiated from *Dragon Age* and *Mass Effect* as a unique third branch for the studio," says studio general manager Casey Hudson, who led the initial stages of *Anthem*'s development. "We had sword-and-sorcery fantasy, we had science fiction, so we set off in the direction of science fantasy. We wanted to create a setting that seemed modern or even futuristic, but with no ties to the real world, and where things could be more mysterious and magical than is possible with hard sci-fi."

#### THE BERMUDA TRIANGLE ON A PLANETARY SCALE

Early *Anthem* had a lot of the key components that ended up in the released game: robot suits; an unnamed, hostile world; a focus on co-op gameplay.

"At the start, the game had a lot of NASA inspiration," gameplay designer Kristen Schanche says. "Everything had that orange-foil NASA look."

There were massive dinosaur-like creatures to fight and castles made of rocket ships, the latter pulled down from space.

"One of the goals at the start was not to be fighting humanoid enemies. It was a game about fighting monsters. This Bermuda Triangle planet pulls people in, and everyone has to band together to survive against this really frightening, dangerous world."

This was just one idea, though.

"There were some other ideas that were kinda crazy," Derek says. "I remember we even tried this idea where you were inside a Dyson sphere, like you're inside of this big planet. We even did a test version, because we could quickly model something up in the environments. We had this sloped planet. And we built this real quick skybox. And we started running around and everybody was getting motion sickness, like I can't tell where I'm going. Am I running up? Am I running down? Within that day we were like: No Dyson sphere."

They returned to the Bermuda Triangle idea and began to iterate. At first, the gameplay was very melee focused: You had fifty bullets, and when you ran out, you ran out.

The game story evolved to include relics that harnessed the Anthem of Creation and Freelancers in a suite of exosuits called "javelins."

The genesis of these iconic suits came in the early stages of development. At first, the suits were parts-based, a design that helped determine where in the world players of certain levels could go.

"It was more like lots and lots of parts, and you would build the suits that you wanted," Kristen says. "It'd be like, 'Oh, we're gonna go up to the snowy mountains, so we need to build a suit for this mission that has lots of insulation in it.'"

If players went up there without the right suit specs, they'd die.

#### GLIDING THROUGH A HOSTILE PARADISE

Cutting the ability for players to glide was one of *Anthem* lead designer Preston Watamaniuk's most controversial decisions during development. The ability allowed players to traverse the massive world outside Fort Tarsis with greater ease, swooping down where they wanted.

"Steve Gilmour pulled me aside," Preston says, "and he was like, 'Why would you cut gliding? It's so fun.' And I said, 'Well, it's because it's too fun right





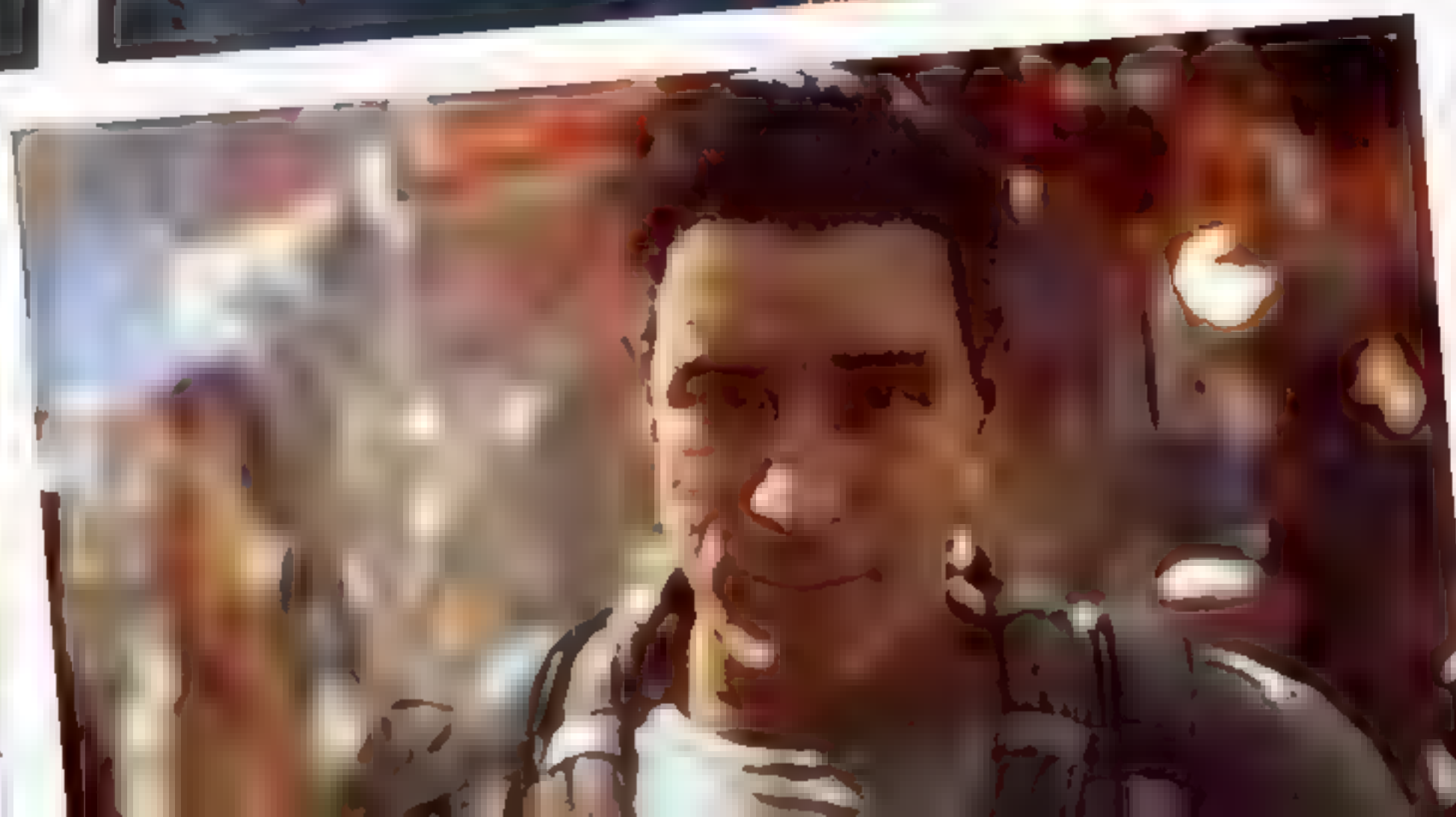
now. It's actually hijacking the rest of our development and not allowing us to actually figure out what's going on elsewhere in the game, because people are flying over the entire map."

Preston told Steve he intended to bring gliding back. "It's too fun not to come back. But the team's got to figure out all these other things."

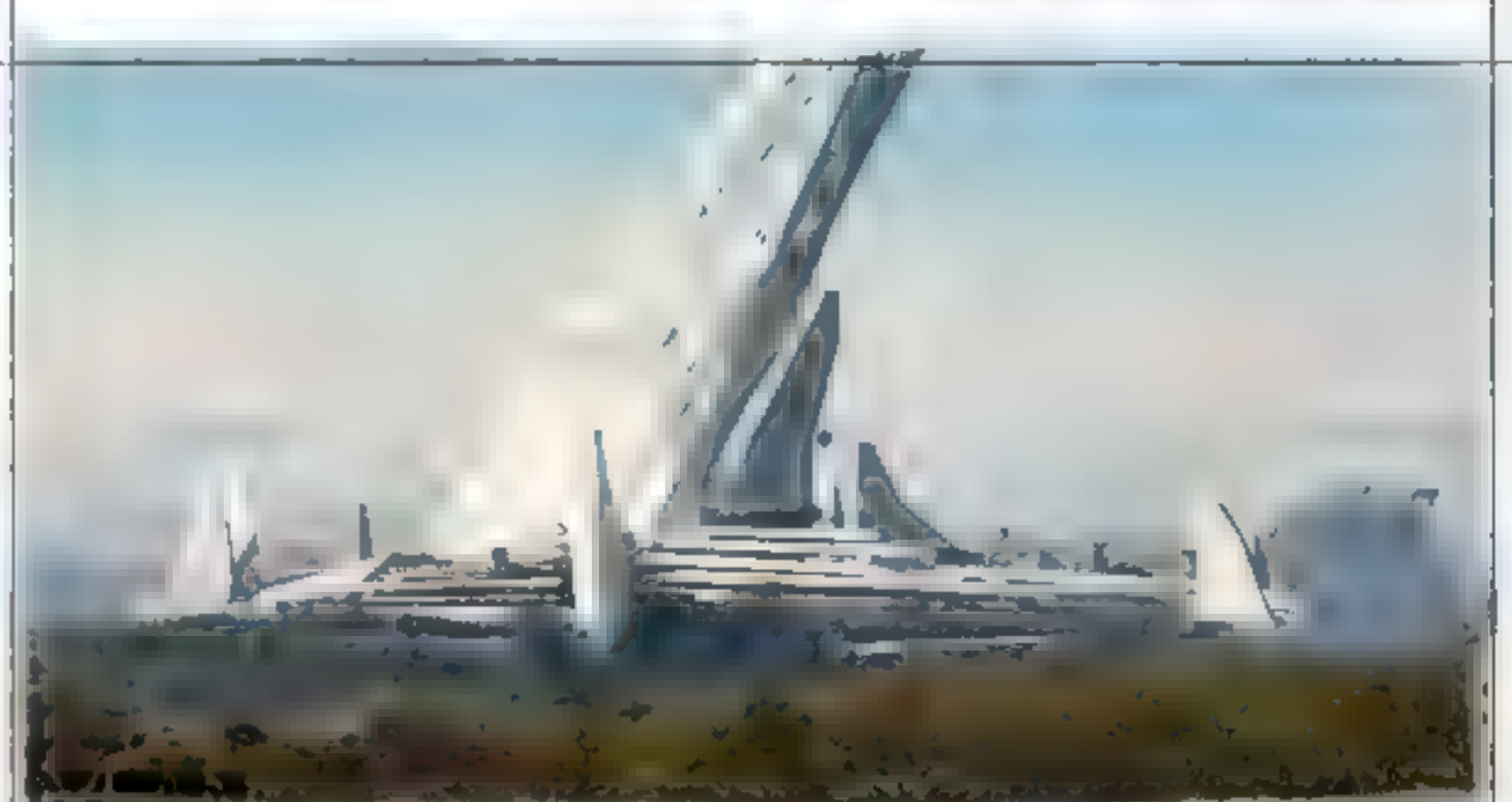
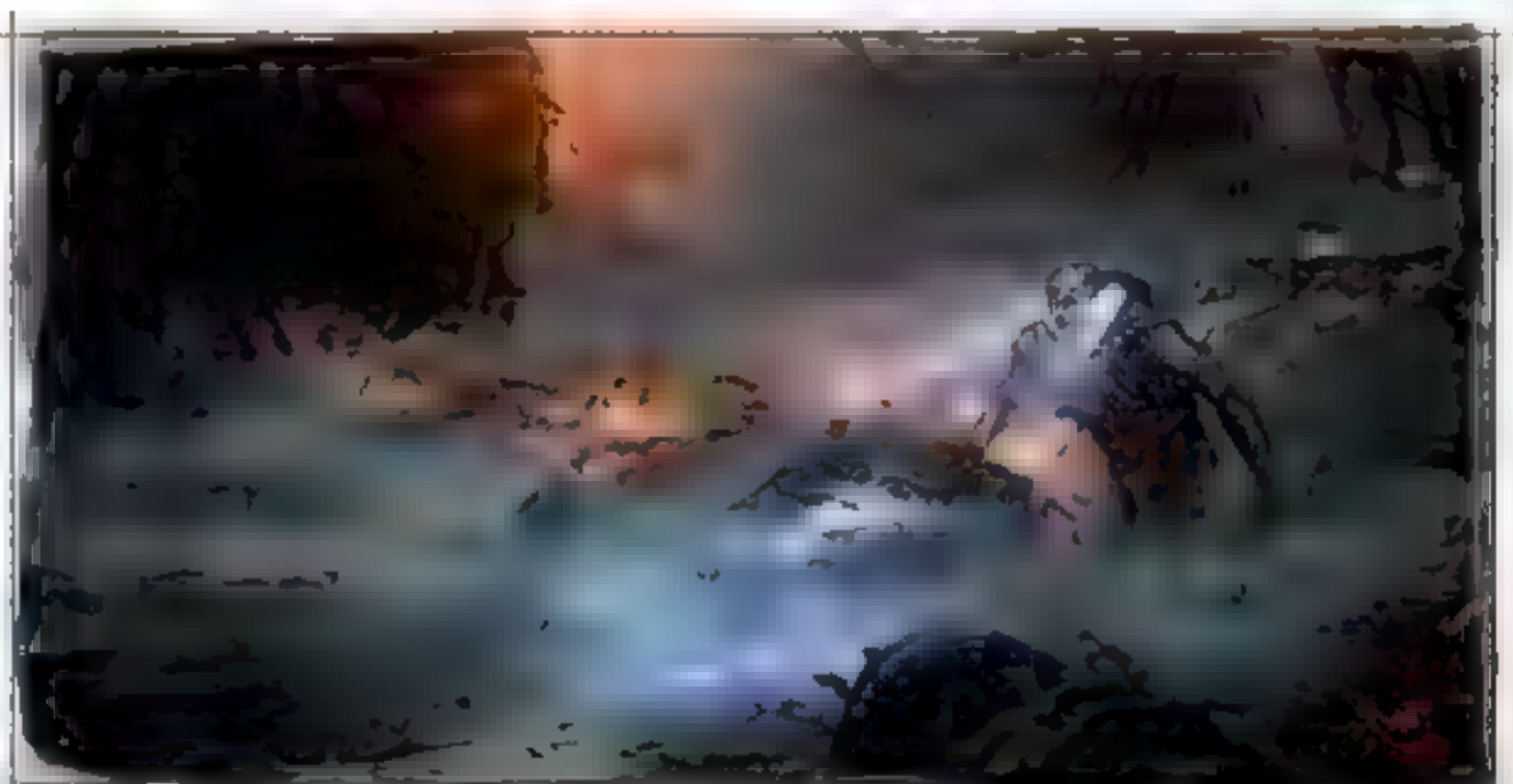
After gliding was cut, the ability to climb was also on the chopping block. "It was slow. It was ponderous," Preston says. "The rest of the game had become quick, fast paced, more action oriented. In that world, climbing just didn't make a lot of sense."

Gliding returned as the better option, but with design elements that only allowed players to stay in the air so long before they were pushed back down into the world.

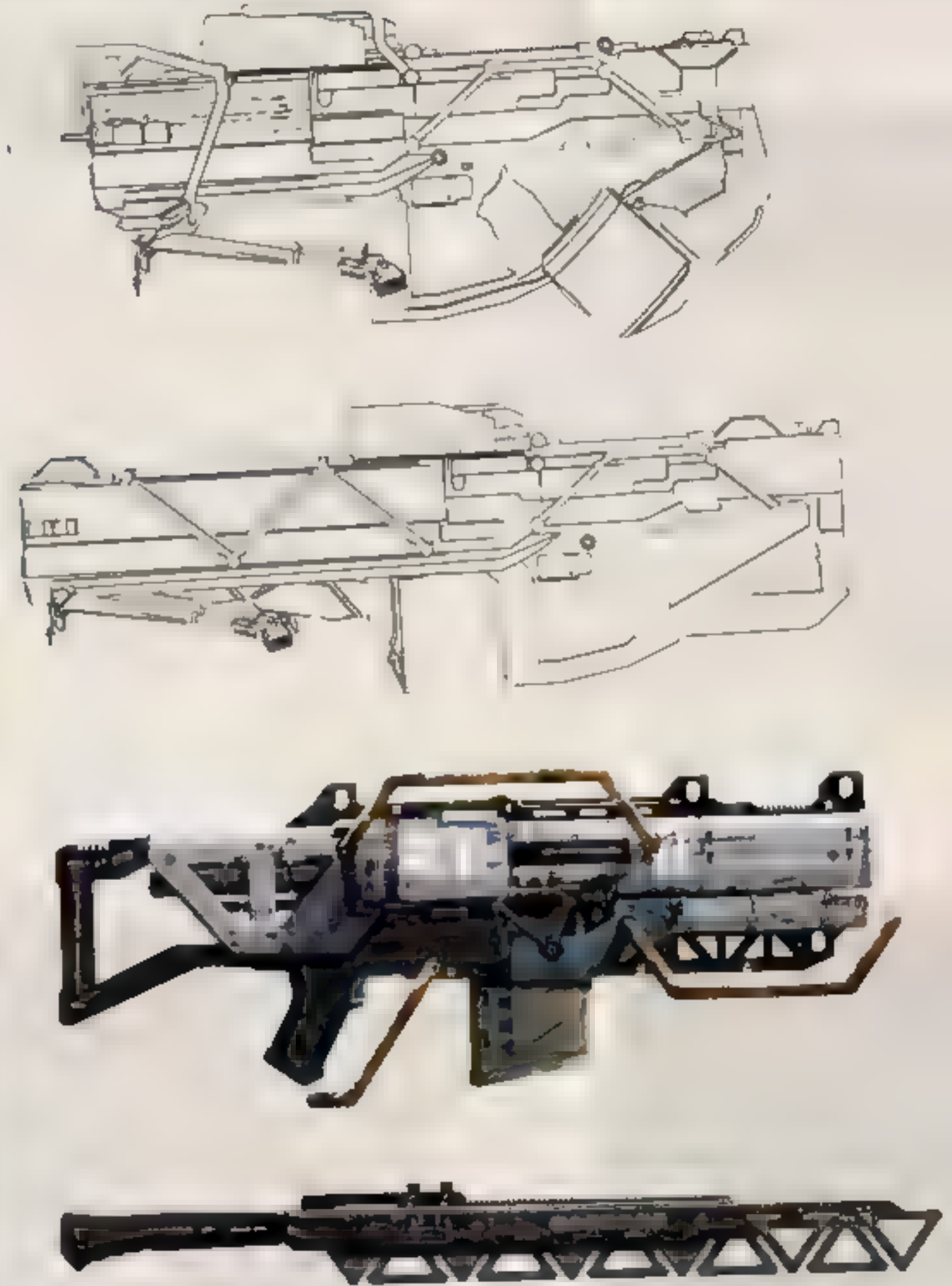
"Flying was our biggest win by far. Honestly, just controlling the suits, period," Kristen says. "It is crazy to think that for a while *Anthem* almost didn't have it, when in many ways it's the defining feature of the game."





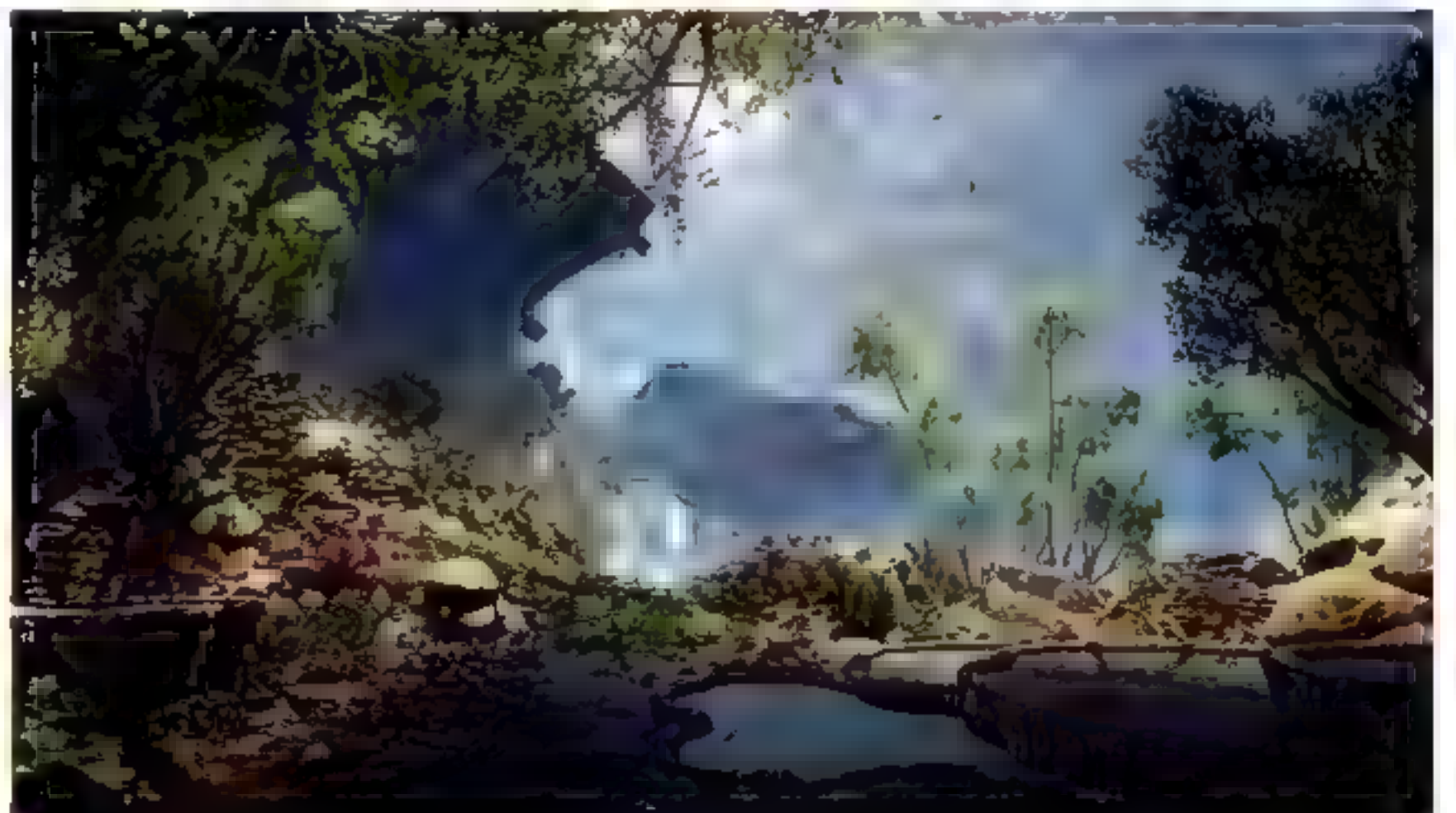
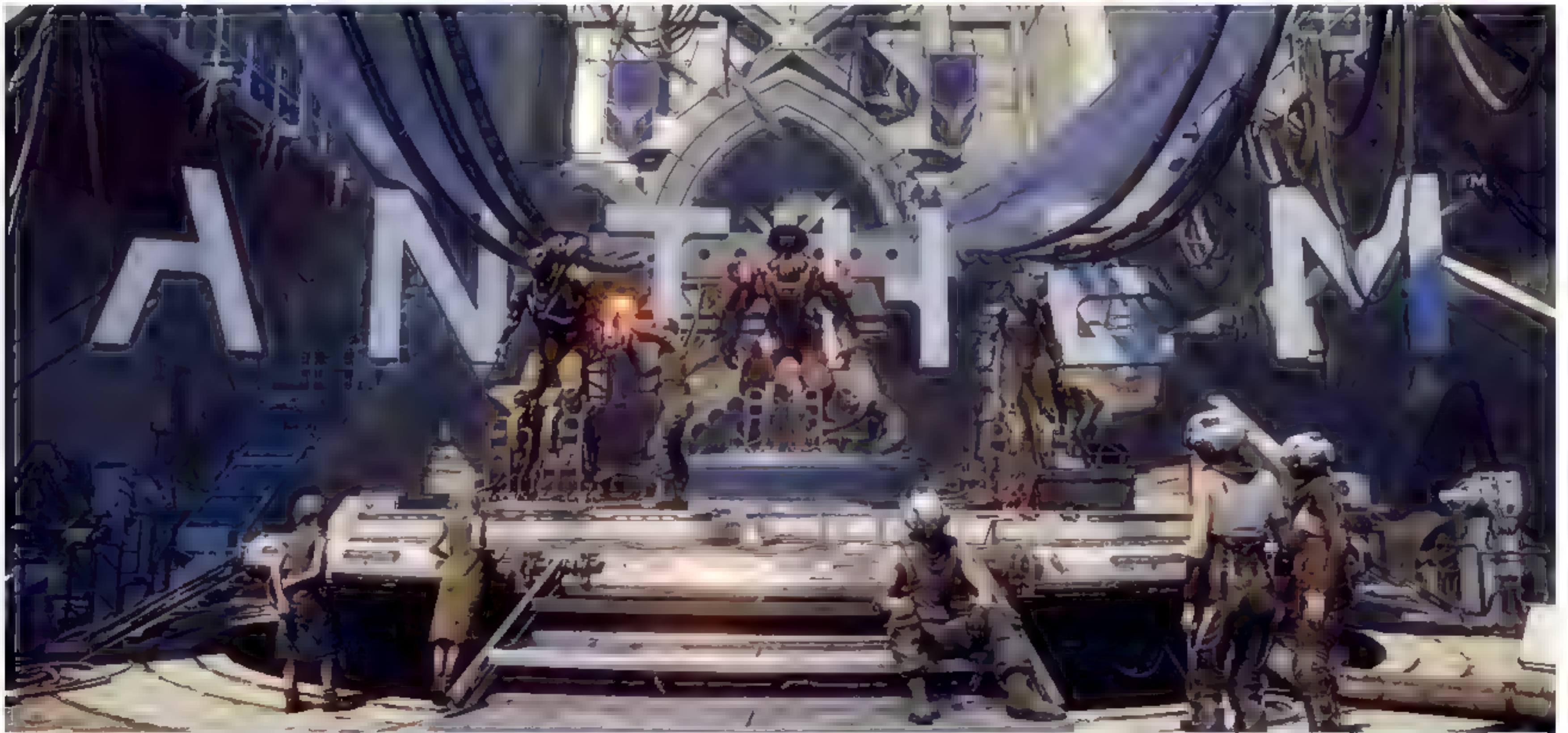






These early Anthem concepts are from a time in the project when player characters were humans from Earth fighting to survive on a hostile alien planet. They equipped themselves with outfits and gear apparently scavenged from a downed NASA shuttle









## REAL TALES OF DEVELOPMENT: **ANTHEM** CREATURES ON THE FARM

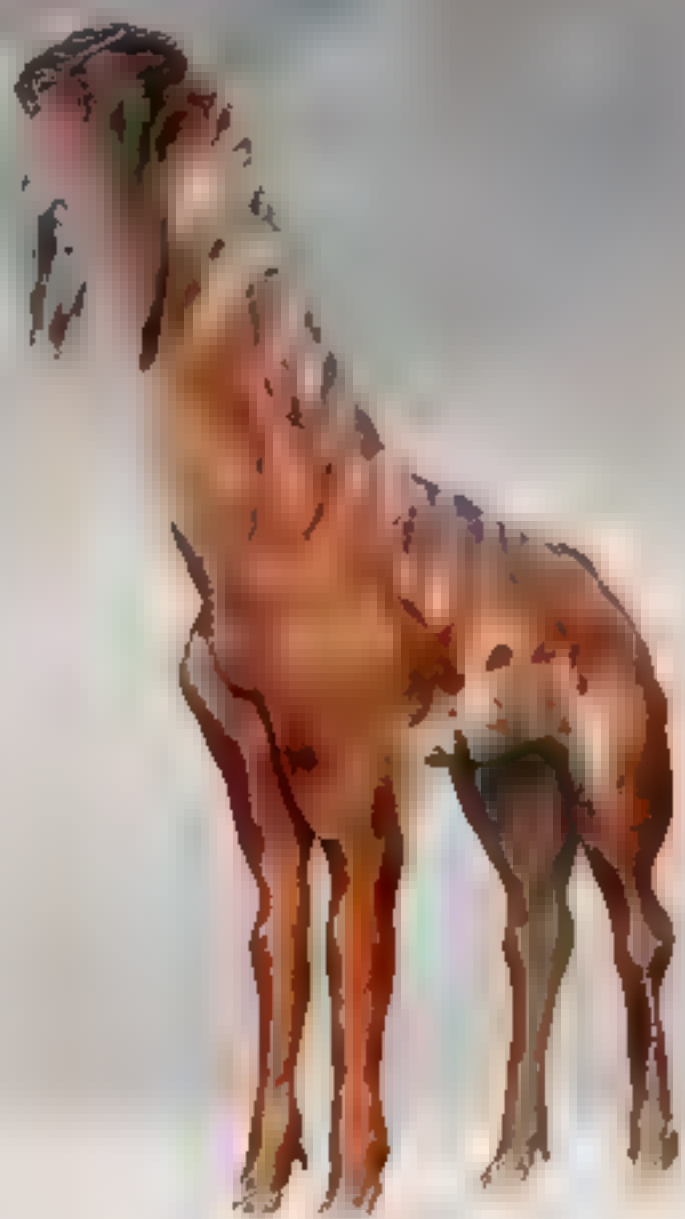
**TO CREATE THE GROWLS** and roars of massive wild creatures in *Anthem*, from digesters and anrisaurs all the way down to less threatening fauna like grabbits, audio artists visited farms in the greater Austin area.

Audio artist Daniy Oberle often booked these trips. She's no stranger to repurposing unorthodox sounds for games, using camels and dogs to create SFX in the past, along with toy wheels for sounds in *The Old Republic*. These trips for *Anthem* were something else, though:

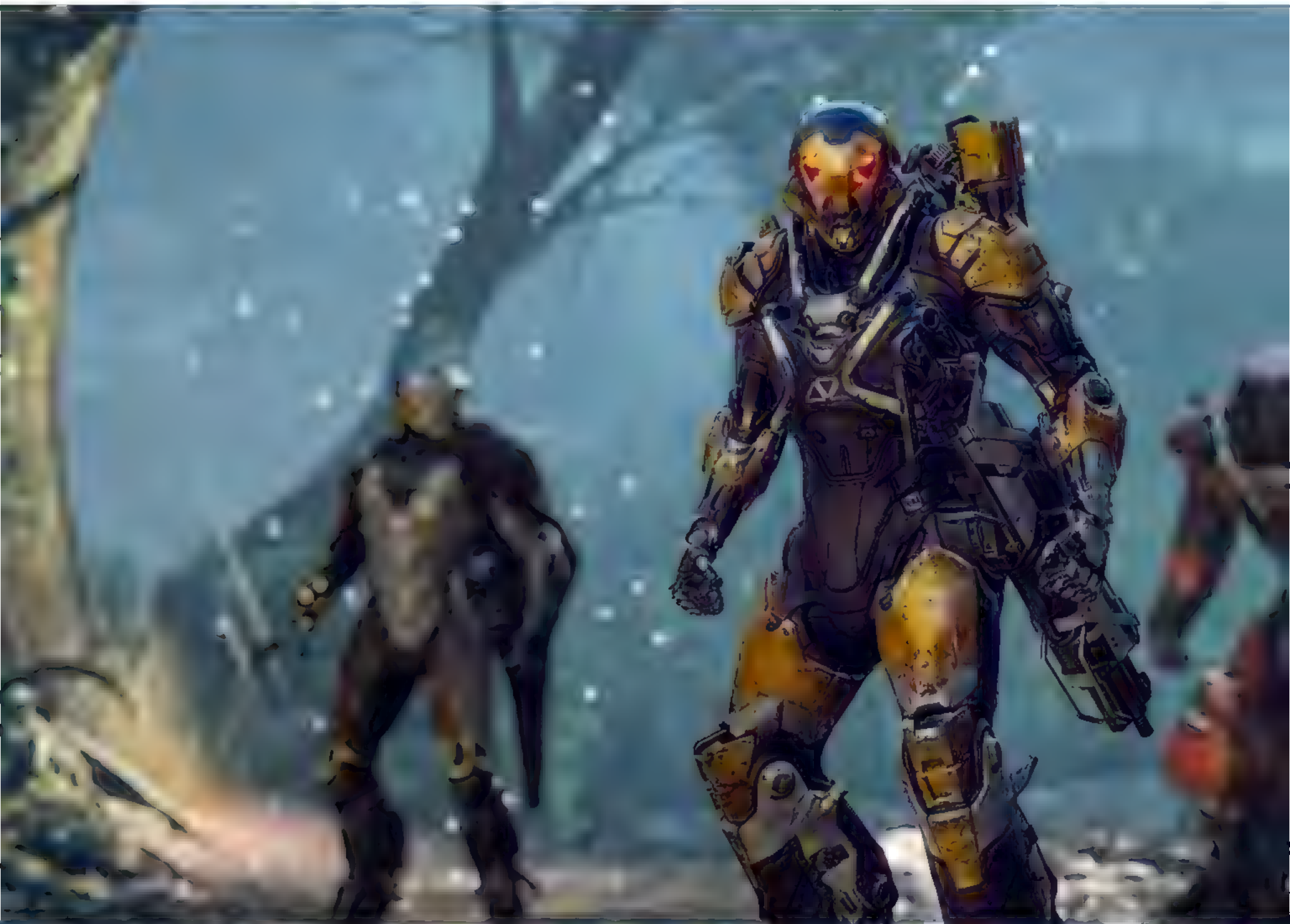
*Many animals seemed to only make sounds when the farmer is at a distance and approaching—like: "Hey, feed me!" Some of the farmers put out food for the animals, which resulted in delighted squeals and munching sounds. Some of the animals were hard to get to and so there are only distant sounds. Babies separated from mothers also make lots of noise, but you have to chase them a bit.*

*The other challenges are background noise: trying to keep all the humans quiet. Planes, other*

*animals, and even the sound of moving clothes can get in the way of a recording. I didn't have a back-supported harness yet, and the recording bag around my neck wasn't ideal—in future, I would like to be able to move faster. I also learned there is a real magic to coaxing animals that I don't have (yet). Now I understand why [animal recording] specialists are so revered. They are fearless with animals and know how to coax sounds out of them. They've also spent years cultivating relationships with handlers, private zoos, and farmers to get talkative animals. When I was setting up the gig, some farmers declared certain animals never made noise, but others talked all day. My best performer on that trip was a little goat, Pearl, who slipped right through the fence and followed us—whenever we tried to put her away, she cried and cried—so we had to have her with us the whole time. She was a very good actor and assistant—we made sure to thank her in the credits.*





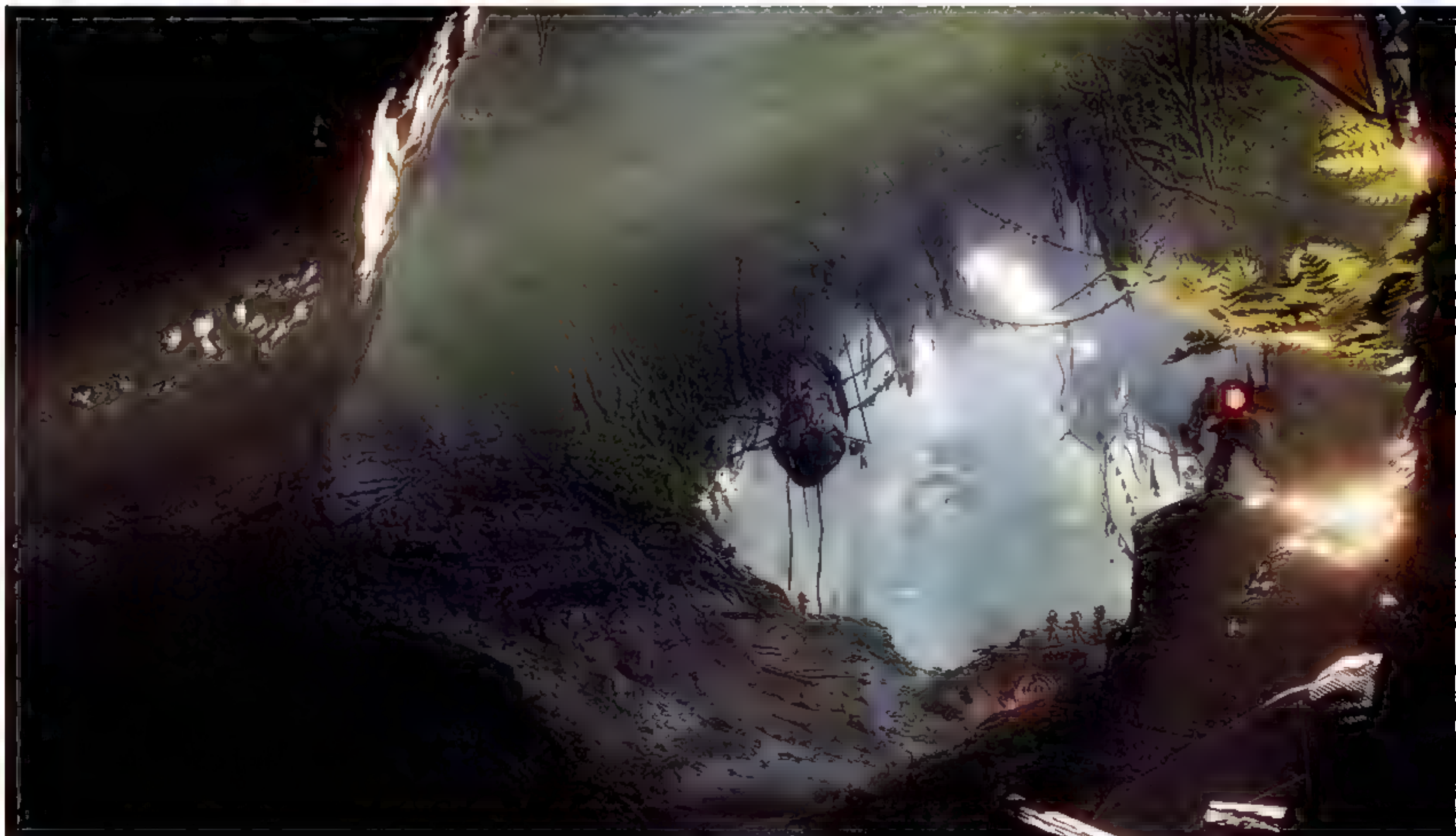
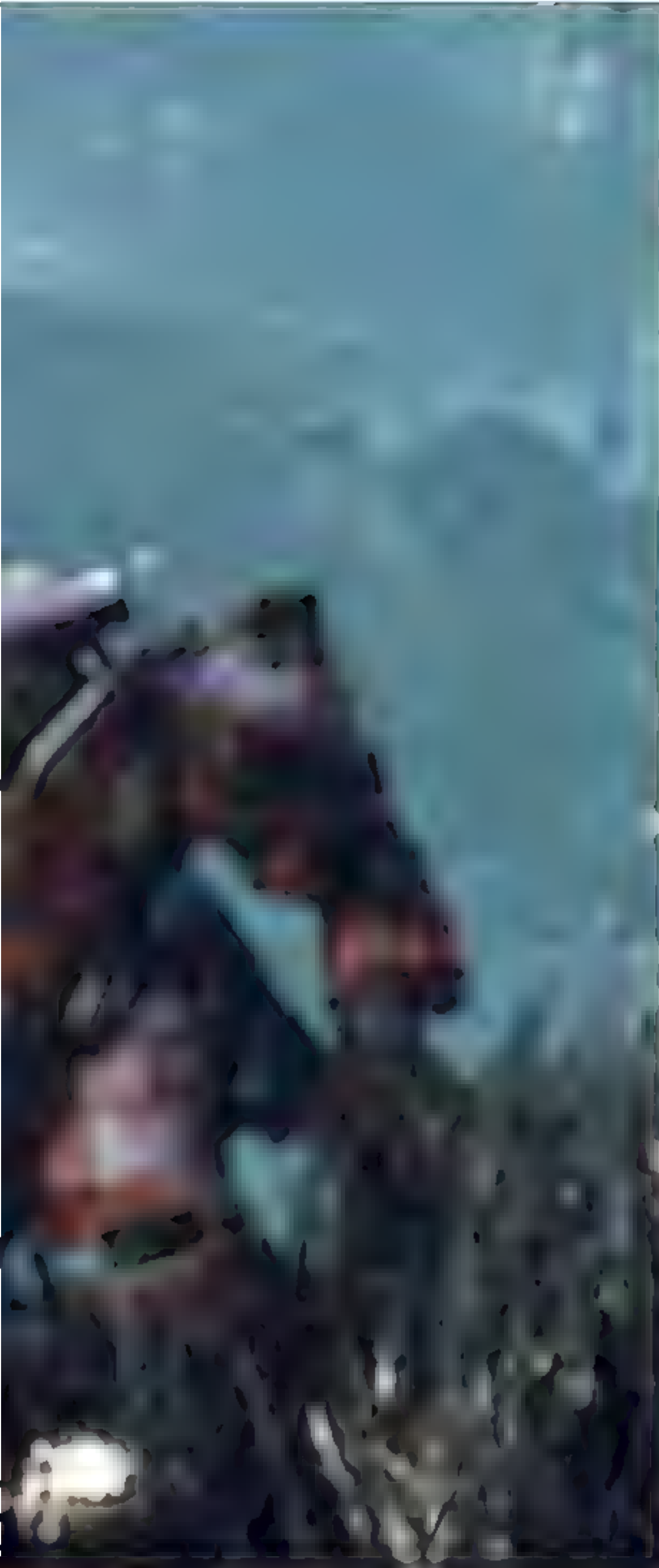


One of the best things that came out of this was that the team was able to do a lot of photography of the cutscenes and the story, which was a great way to get a sense of the game's atmosphere. It inspired the idea of a story setting where a group of people are living in a lifestyle where they are constantly being hunted by a group of people who have fallen from the sky. A person is connected from the outside world and then it goes into a world of space travel, but also, through some kind of portal. The people would want to make use of the technology and create powerful things with it—namely, weapons that would allow them to survive in a dangerous world—but they weren't the inventors and did not know the science behind them. Much like the concept of the novel *Roads to Perdition*, where humans are at the mercy of an alien ending and know how to get things done, but have no idea what they're really for.

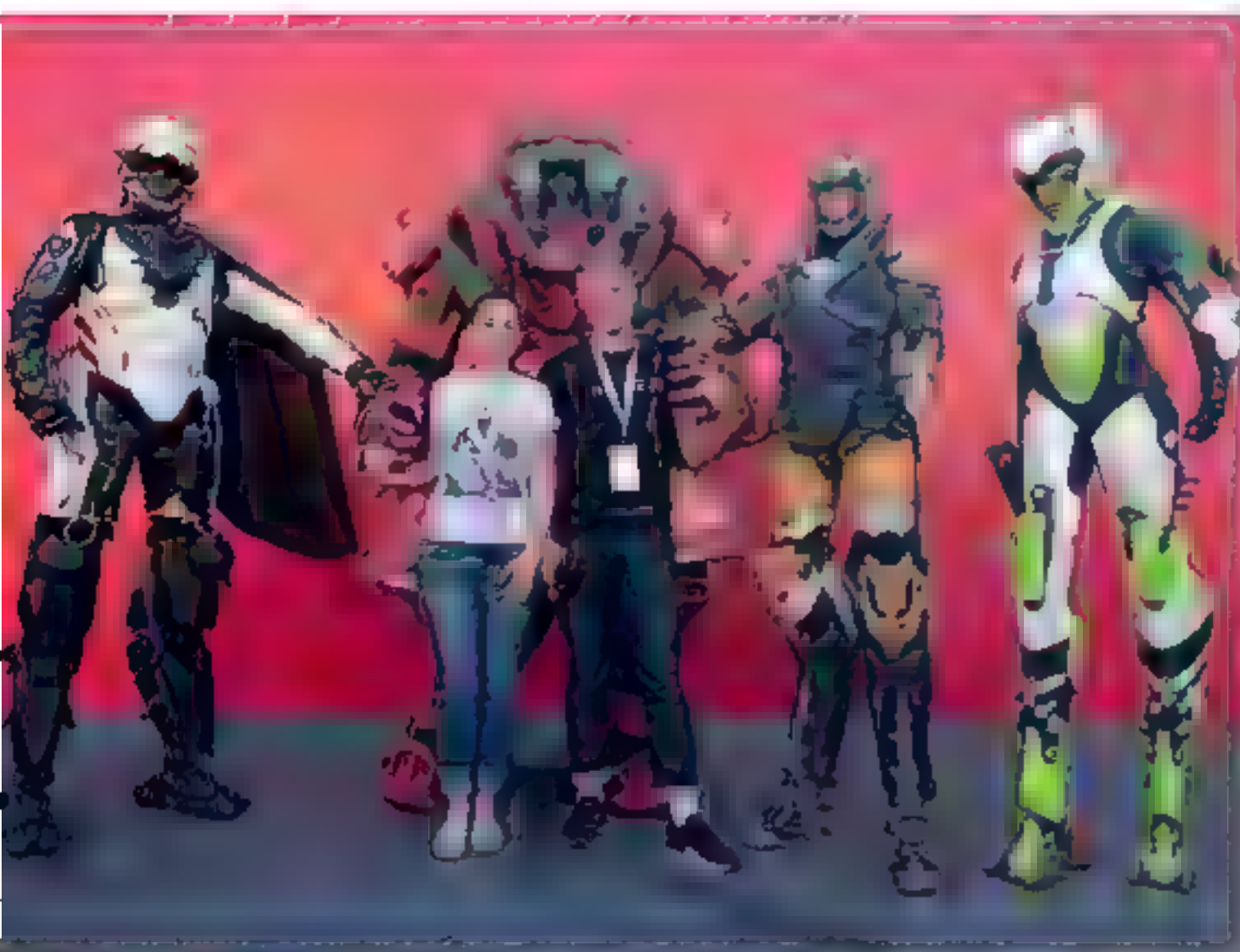
—BIOWARE EDMONTON GENERAL MANAGER CASEY HUDSON











## BIOWARE MADE WEARABLE EXOSUITS

TO CELEBRATE THE RELEASE OF *ANTHEM*, BioWare commissioned four true-to-life javelin suits: a Ranger, Storm, Interceptor, and Colossus. The wearable exosuits, created by Toronto's Henchmen Studios, were made over an eleven-week period out of cast plastic, fiberglass, EVA foam, and accents unique to each suit, like aluminum, Cordura, and leather.

Though they lacked gliding and combat capability, the finished suits otherwise looked like they walked right out of the game. The largest suit, the Colossus, stood eight feet five inches tall and weighed one hundred pounds.

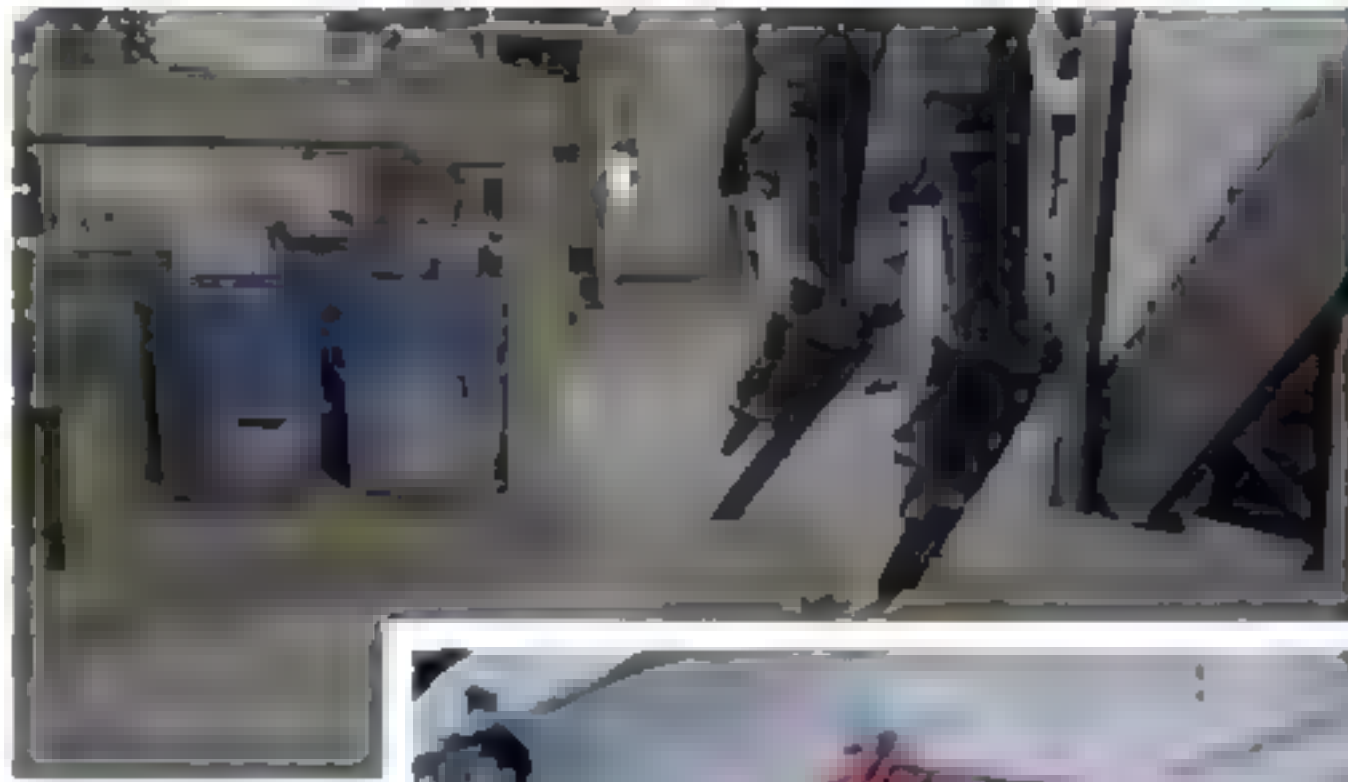
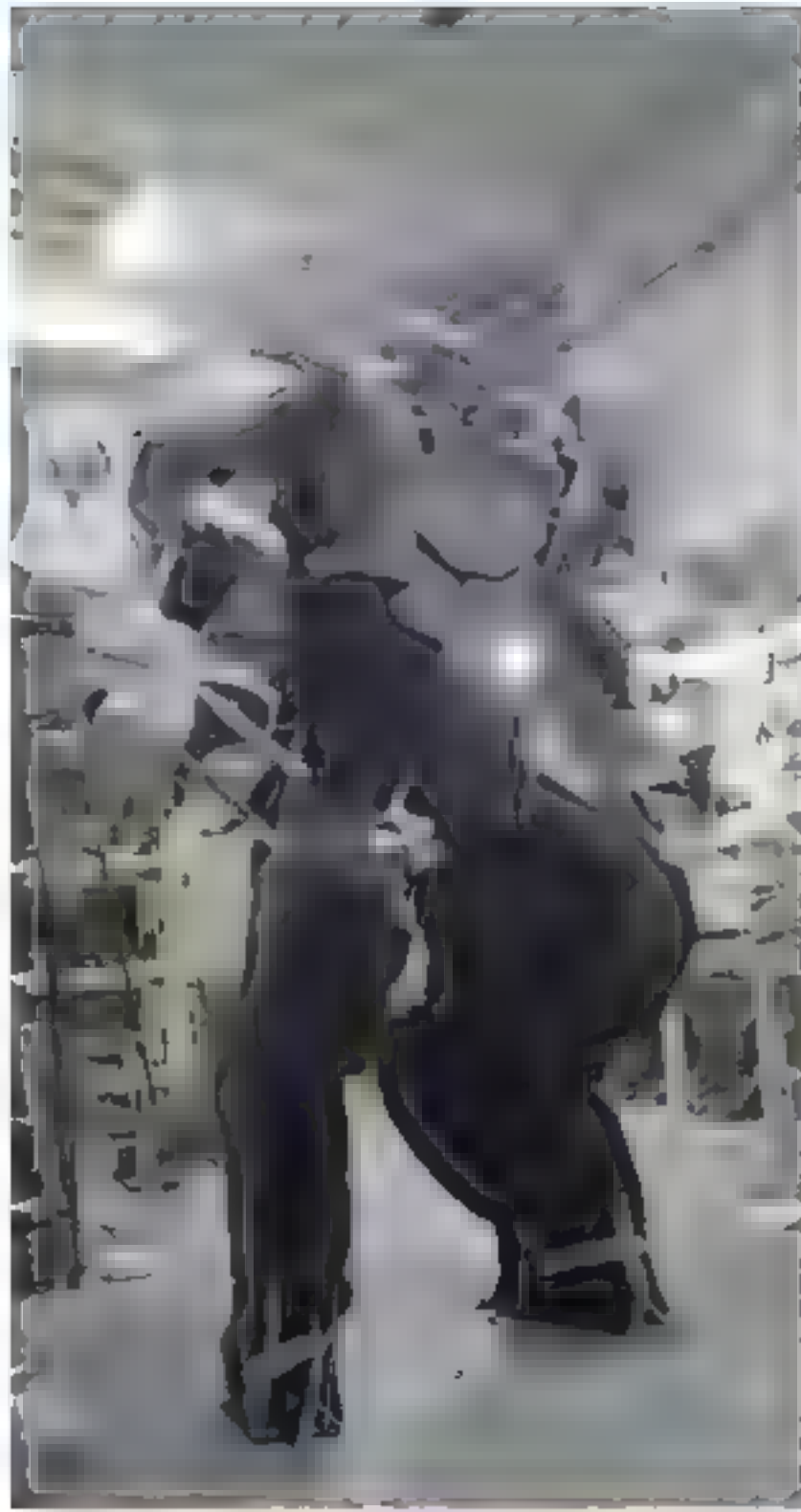
"The pictures are not showing the metal stilts the actors were trained on for over a year, the heavy fabrics that lay underneath the armor, or the plastic piping and steel frame used to construct the top of the beast that is the Colossus," *Anthem*'s business development specialist Amanda Klesko says.

"The sheer size and scale of the suit alone was breathtaking, but when placed on our actor that we worked with for nearly a year and seeing the suit take movement . . . tears were shed, squeals of excitement were heard."

The suits have since retired to places of prominence in BioWare Edmonton, BioWare Austin, and EA Redwood Shores.





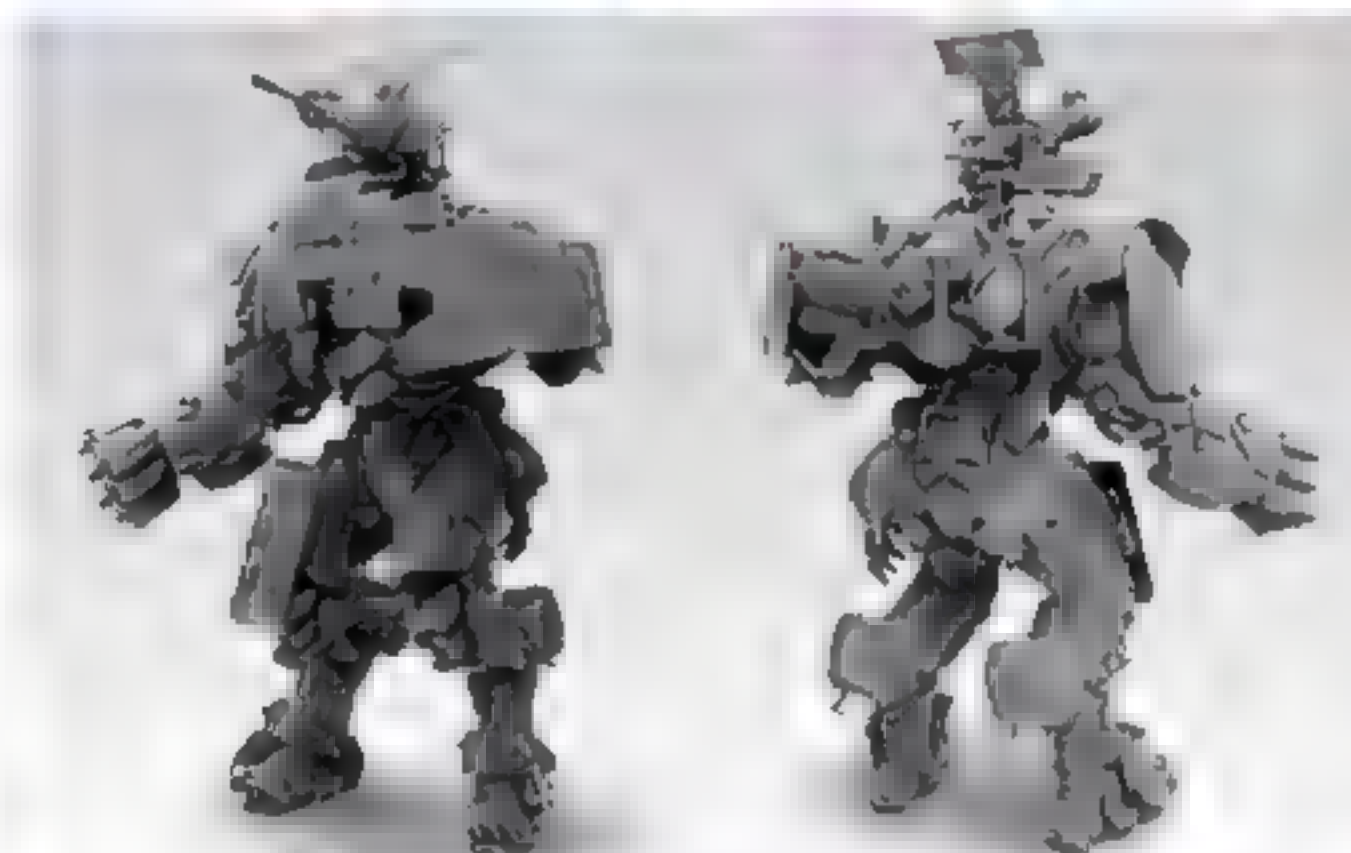


A third kind of watermark on 3D content that B. Wu has characterized, with a slightly different goal 2D file processing, by Antonios, is known as a *test* on 3D

The work was very close to the company itself. The sales in part, just had so many more profits and losses that it made the company not concepts to get much out to where it needed to be. It was a process that took three to four months in it.

The obsession with data paid off with Hengeman but the suits noticed it. The propaganda machine makers found they needed to make only minor adjustments to the Ranger in particular in order to accurately fit a human inside.

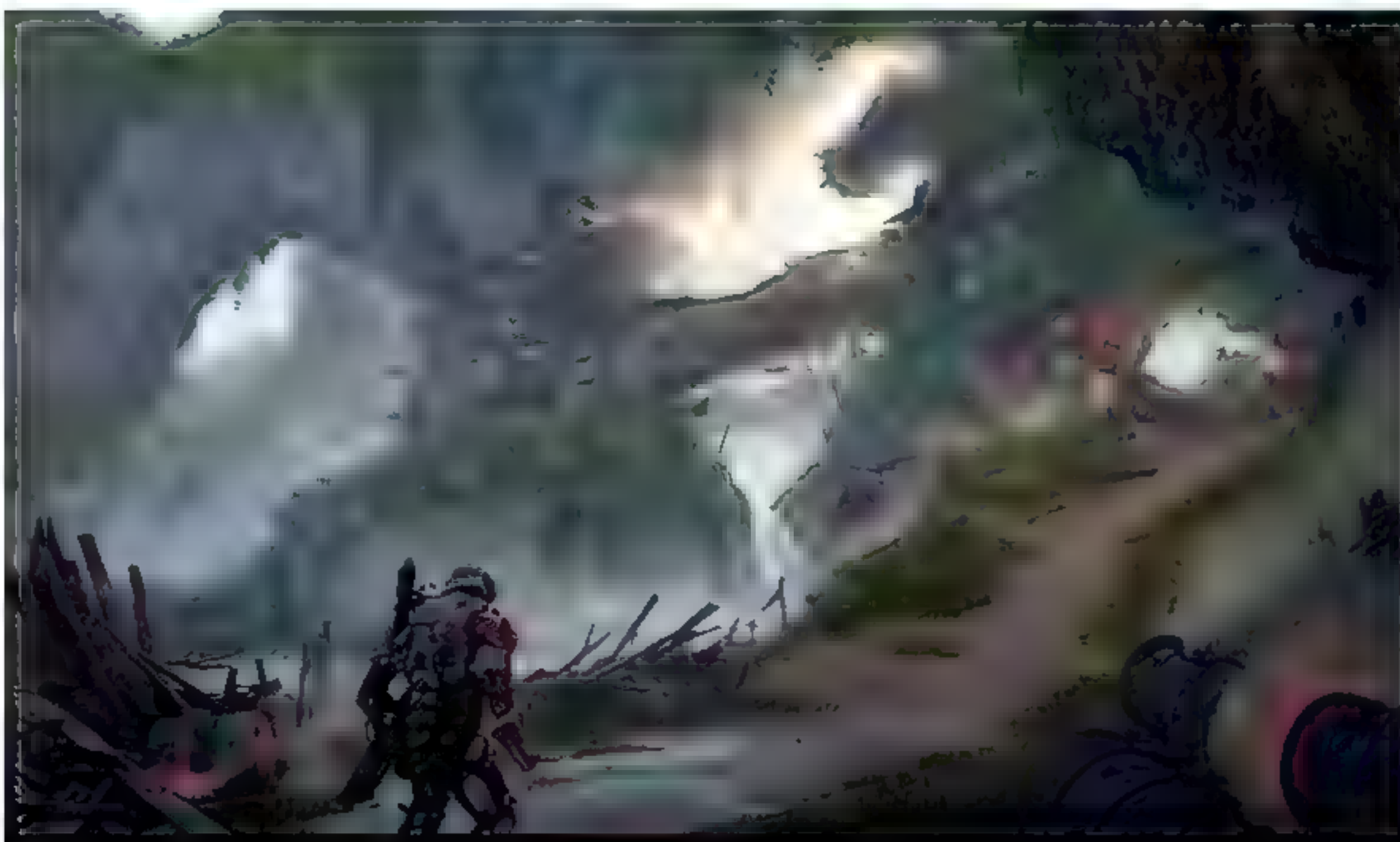
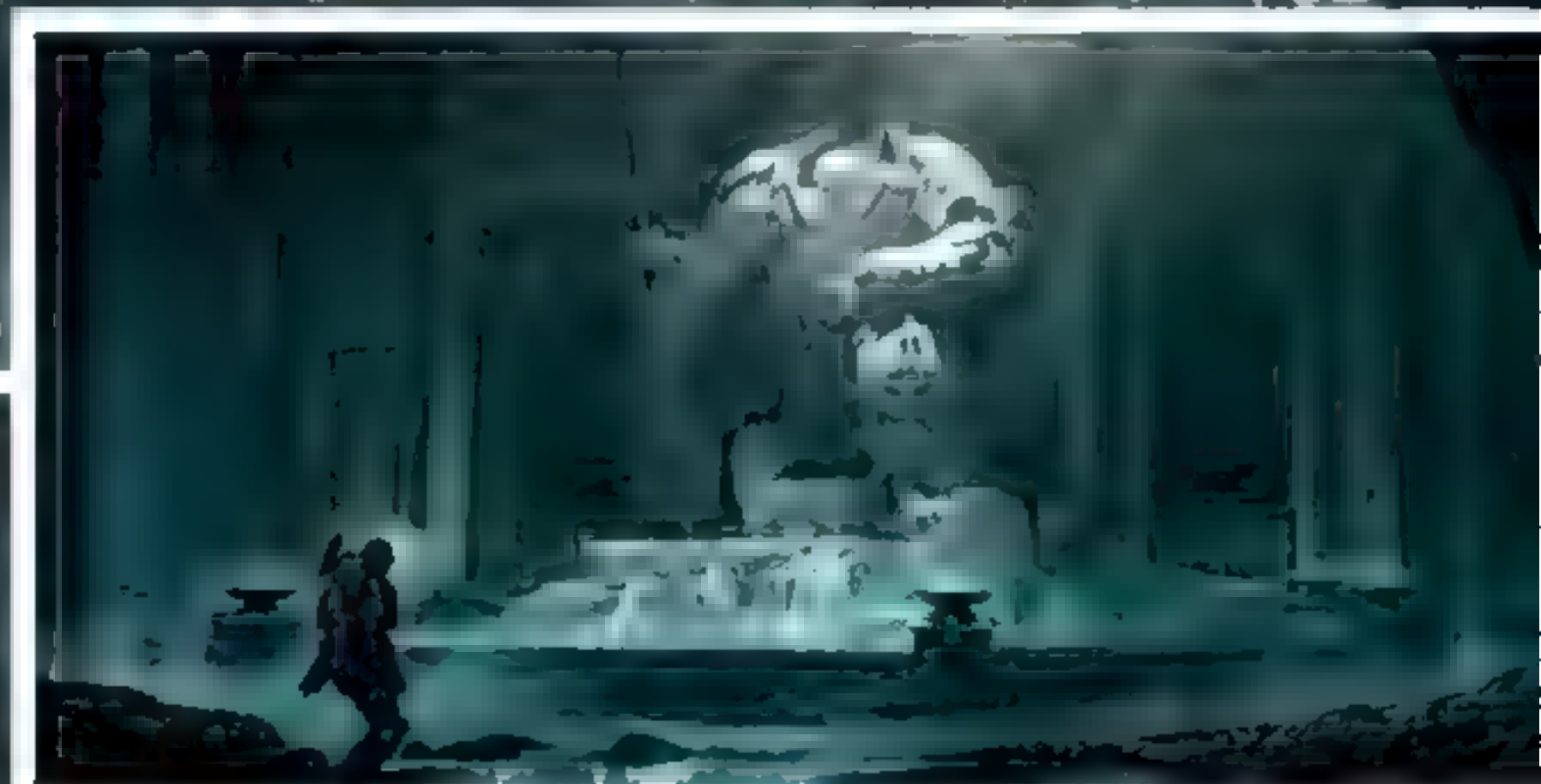




These images explore potential options for Anthem's javelin exosuits: how to make each one iconic and suitable for its various gameplay functions.

"We did countless concepts for the exosuits before we whittled it down to the four iconic versions you saw in the game," art director Derek Watts says. The general direction: *Interceptor* was a knife cutting through the air. *Colossus* was a tank. *Ranger* was a futuristic marine, while *Storm* was the setting's take on a mage.





Anthem was an unwieldy mess. I needed content and creative ideas that grounded core principles like player autonomy and social as well as several types of governments and fiction. There also needed to be larger hooks to tie it all into the universe.

There also has to be a phase where you phrase it back down into what's on the page that simply but embody the idea like a giant map that that concerns you with something small, quiet and easy communicated. Eternity says Corey Hudson, who left BioWare for a time after Anthem's production phase.

When it left we were still in the idea stage, but had not yet done the optimizing stage—and that's really the biggest pitfall, says Eternity. It was necessary to look at the game for the first time again in the E3 2016 trailer where they had focused the world into something knowable and inspiring. It was still centered on a giant robot world and heroes wearing exosuits, but the team had pulled together the setting and gameplay into a much more cohesive package. And one of the people could get really excited about













**REAL TALES  
OF DEVELOPMENT:  
SPANISH ANTHEM**  
DISASTER NEARLY  
STRUCK ON SET WITH  
NEILL BLOMKAMP

TO HELP PROMOTE *ANTHEM*, BioWare partnered with writer/director Neill Blomkamp to create a trailer for a \$200 million movie that didn't exist—a story set in *Anthem*'s world through Blomkamp's lens.

The shoot for the trailer took place in rural Spain, in old castles near the mountains.

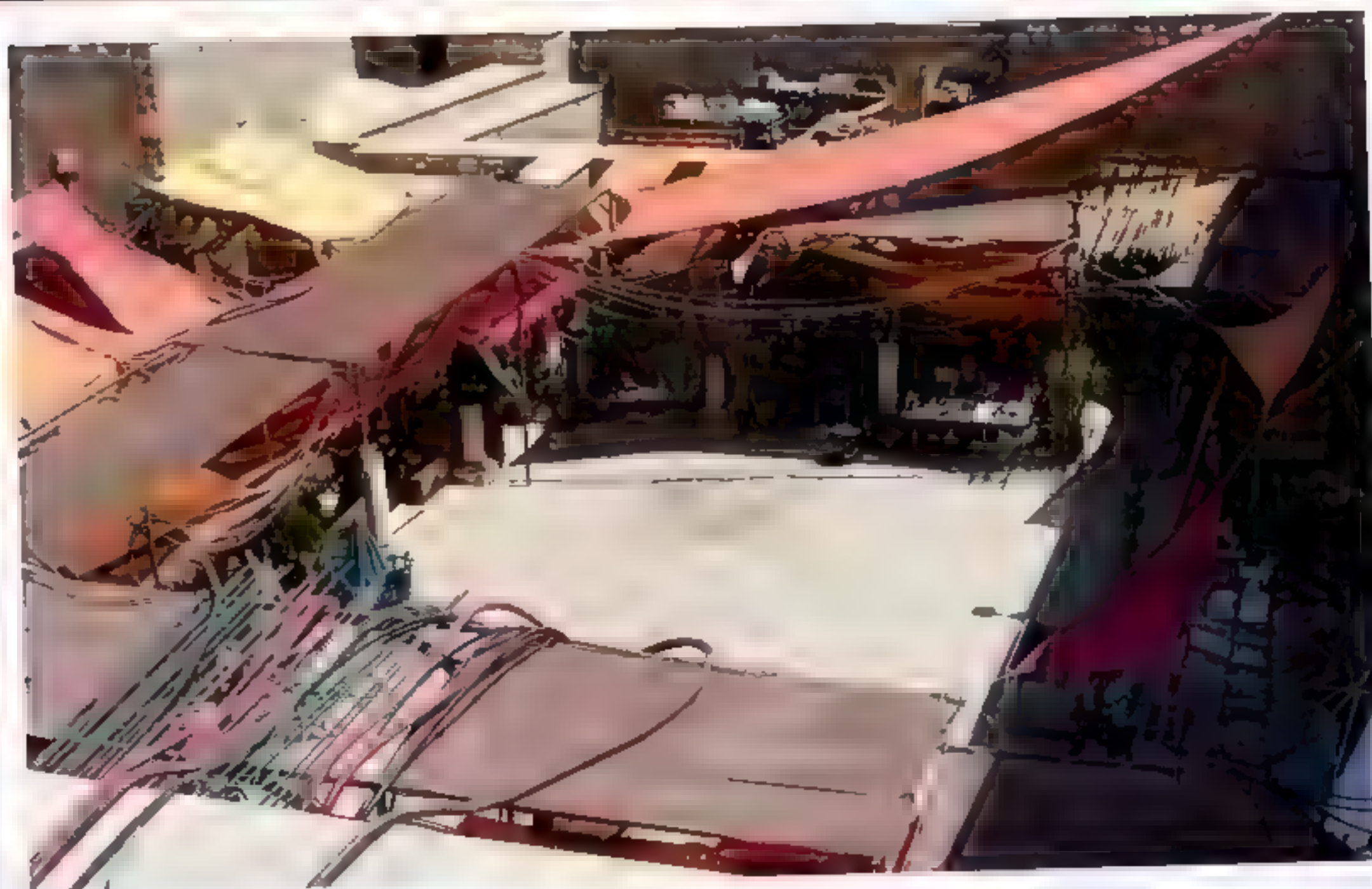
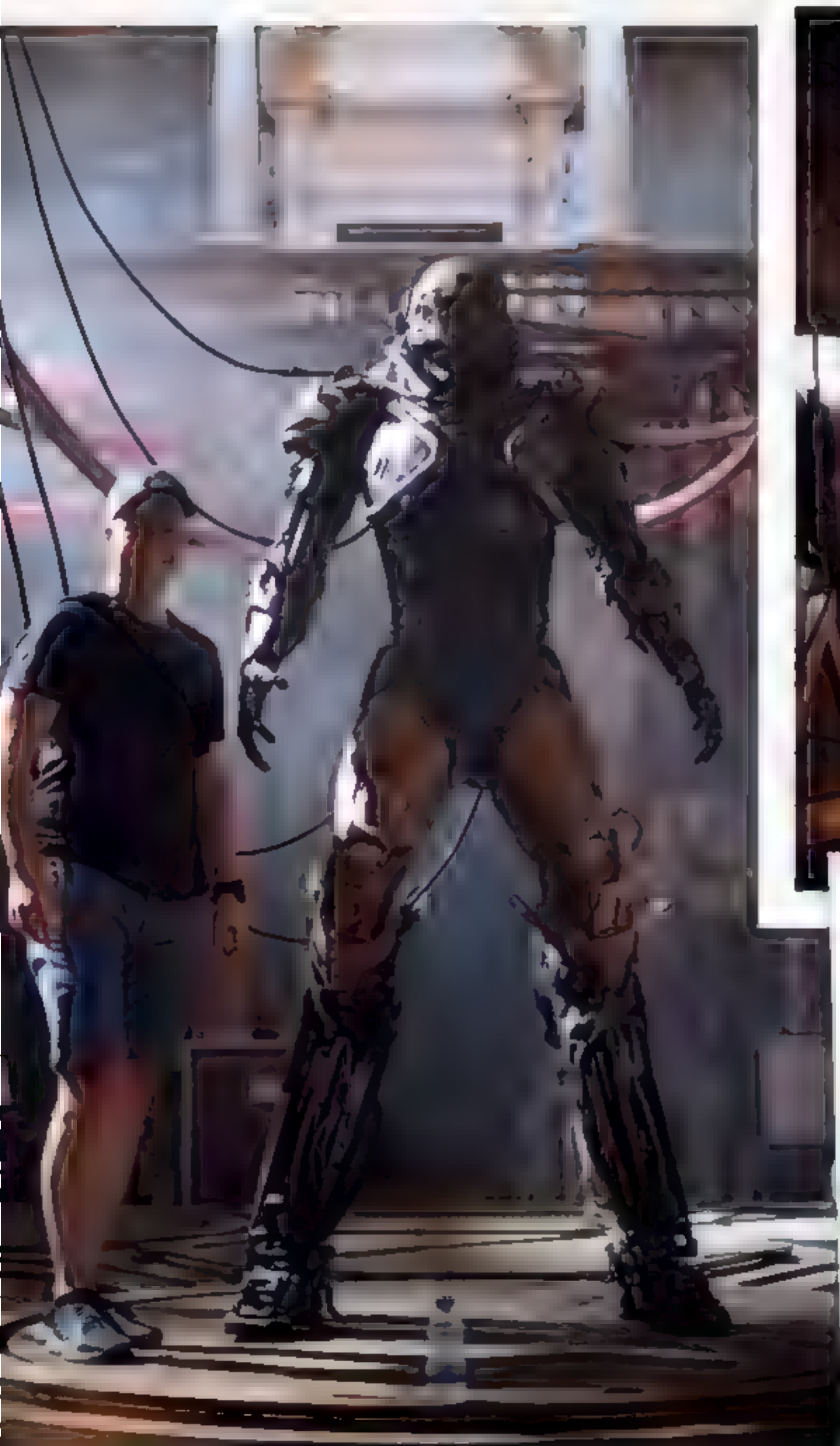
*Anthem* IP director Mac Walters was taken aback when he saw the location. He says he'd never seen anything they'd done in a game so clearly represented in the real world.

Mac recalls stopping for a beer before shooting began in one location near the mountains:

*Everyone's kind of gathering around, and we go over. It's been raining in the mountains. And this aqueduct now is flowing with probably ten to twelve feet of mud, rock, everything, like a creek. It's probably thirty feet wide, one of those disaster movies waiting to happen. And at one point you could hear what sounded like thunder, but it wasn't thunder. And then this rock, the size of an Austin*

*Mini, is being pushed down this aqueduct by the force of water, and you realize the thunder is actually rocks hitting this bridge, and at that point I was like, "You know, I think maybe . . . we could be in serious danger." It was like, you know, whole trees being swept down this thing—this flash flood that occurred. Meanwhile, we're thinking about what's happening on the set.*

*Of course, the set got hit. In a second set, where we had the Ranger and the Colossus, it was an open-air castle. They had to cover the two suits immediately. The lights got soaked. They had to disassemble all the lighting and then the next day hope that when they turned them on, that they'd had time to dry out. Fingers crossed, everything worked. It was damp on the floor. But other than the smell, you couldn't actually tell. They'd done an amazing job preserving everything and making sure that it was good.*







## ANTHEM: CORN MAZE EDITION

**BIOWARE EDMONTON** WAS looking for ways to engage with and expand its profile in the city where it was founded. Developers were already doing blood drives. They'd had a long history of dragon boat racing each summer. Why not a corn maze?

The Edmonton Corn Maze is a minor institution in the city. Each year, a local business sponsors a design to be cut into a fifteen-acre plot of actual corn in a farmer's field west of Edmonton. *Anthem* was in development, so BioWare reached out to the farmers who run the maze. They were skeptical but ultimately agreed to partner with the studio.

"I've done dumber stuff for way more money than that," former BioWare community manager Conal Pierse says. He took the idea to EA and the dev team.

"Amanda [Klesko] and I put together, like, a very serious pitch for the executives, because if there's one thing I think I excel at, it's taking very stupid ideas and distilling them down into business plans."

After some convincing, BioWare's corn maze became a reality, garnering plenty of attention in local media and the community, both locally and globally via the internet.

It's hard to tell how much the maze boosted BioWare's local presence or how much it helped directly promote *Anthem's* release, but it was pretty cool.





## MEET ME IN FORT TARSIS

EVEN BIOWARE MEETING ROOMS  
TELL STORIES

**BIOWARE MEETING ROOMS** have had some pretty iconic names over the years. Rather than just having a number assigned to them, conference rooms are named after BioWare games and lore.

Some rooms have borne the titles of releases like *Shattered Steel* and *Baldur's Gate*. Others, the names of in-game places, like Fort Tarsis or the Hanged Man. Still other rooms have been named after significant events, like the Landsmeet, or characters, like Darth Malgus (that one's at BioWare Austin).

Two particular rooms that stood out at BioWare Edmonton's former Terrace Office Tower location were the Founders Room, named as such because it was converted from Ray Muzyka and Greg Zeschuk's office when they retired, and the Extremely Small Meeting Room, which was, as the sign read, extremely small.

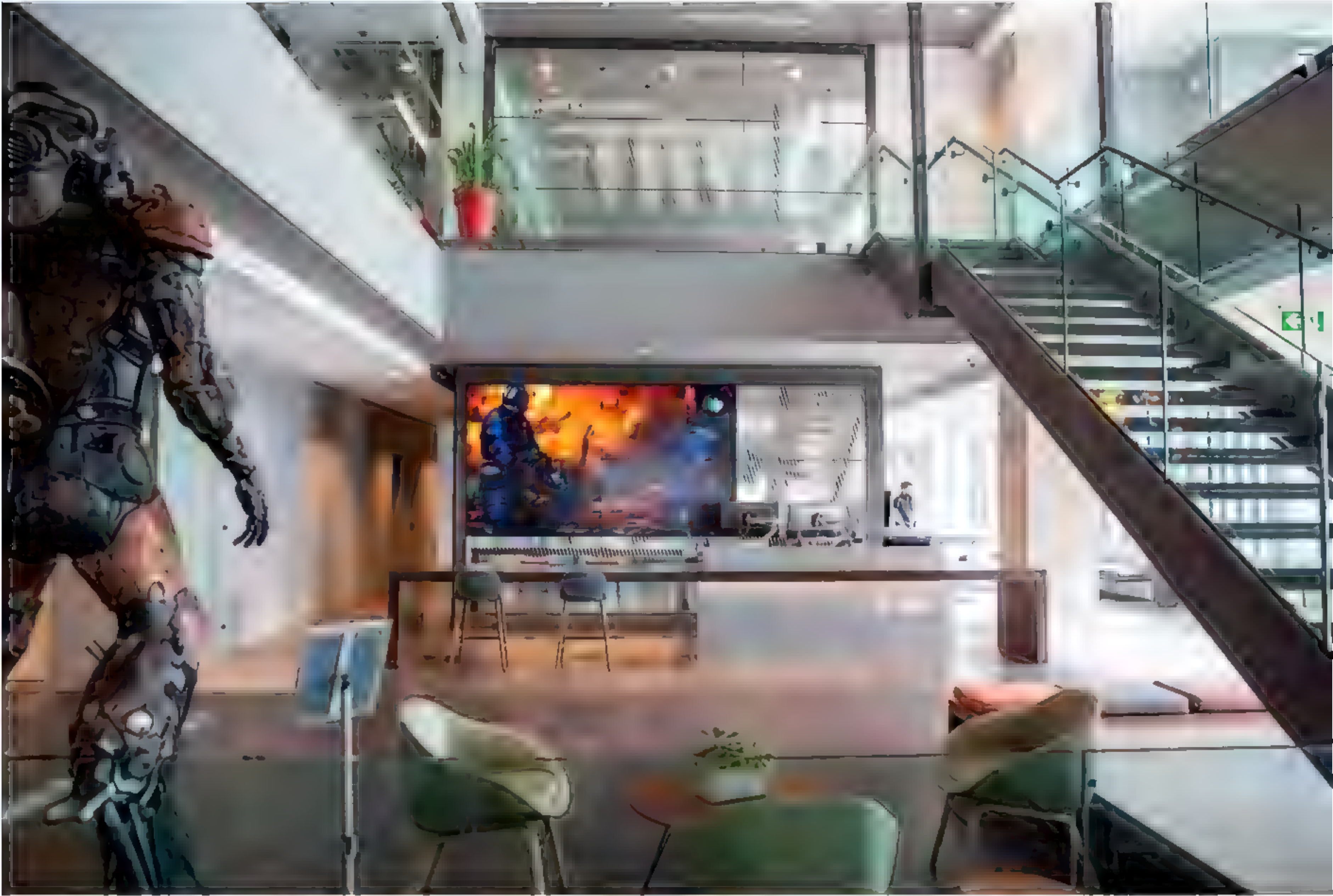


### BIO-TRIVIA THE NAMES OF FORMER DEVS ARE ENSHRINED IN A PUB'S RAFTERS

Below BioWare Edmonton's Terrace Office Tower location was a pub called the Lion's Head where developers regularly met after hours (and sometimes for meetings) to decompress and share a pint.

As developers moved on from BioWare, the pub was where their colleagues gathered to say goodbye. Somewhere along the way, it became a tradition for outgoing devs to carve or sign their name on the pub's rafters to mark the end of their time with the studio. While BioWare is no longer in the Terrace Office Tower, the pub and the names remain. Curious visitors need only look up.

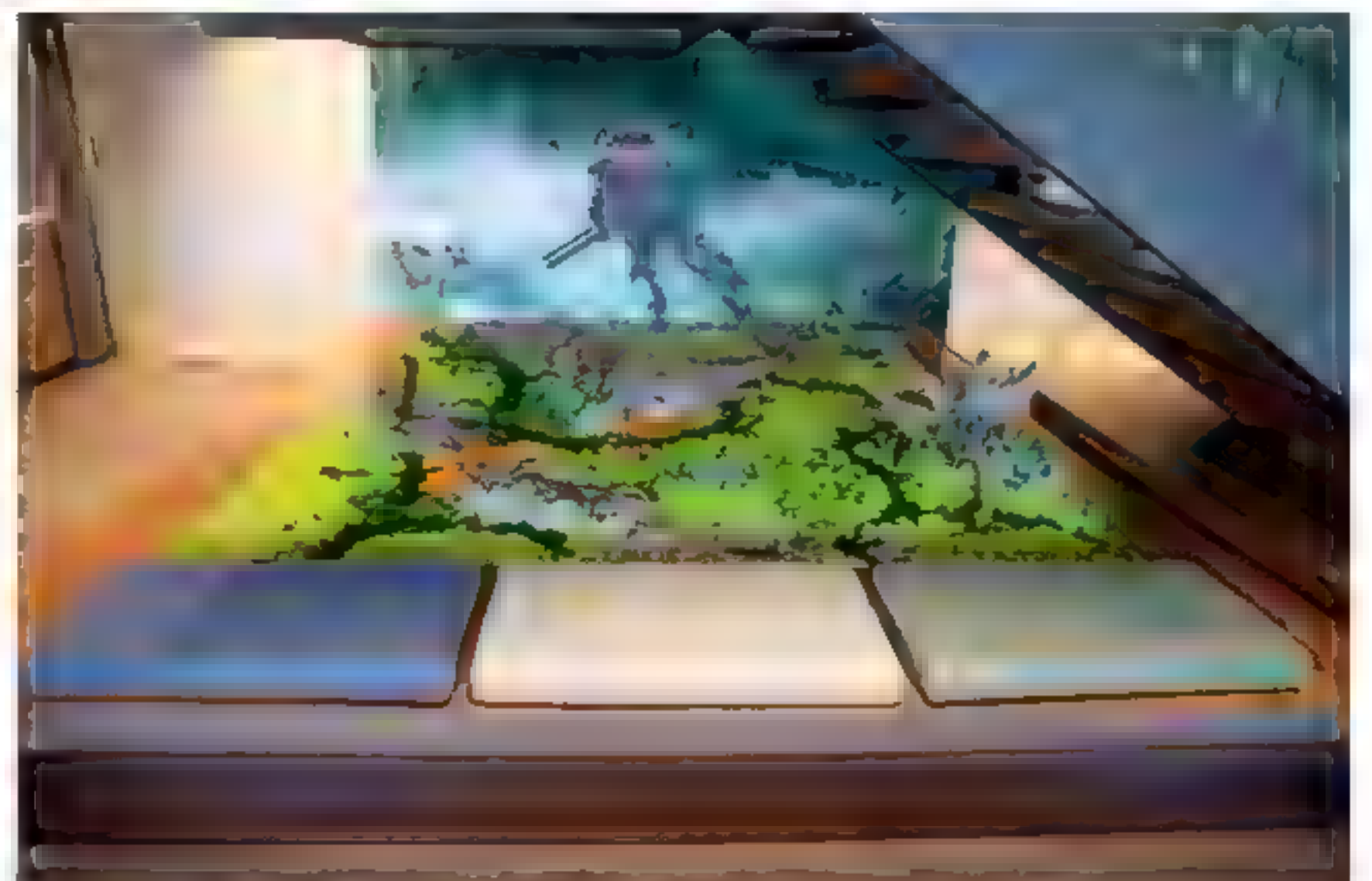




## DOWNTOWN BOUND

BIOWARE EDMONTON GETS A NEW VIEW

IN 2019, BIOWARE EDMONTON pulled up its deep roots in the Terrace Office Tower off Gateway and headed to fancy new digs in EPCOR Tower, a twin-spired, twenty-eight-floor office tower in the Ice District of Edmonton's downtown. BioWare moved its staff of more than three hundred developers into three floors of the tower, where there's plenty of room to grow. The view is pretty different from the half windows in Greg Zeschuk's basement.







### BIO-TRIVIA

#### RAY AND GREG RECEIVED THE ORDER OF CANADA

In 2018, Drs. Ray Muzyka and Greg Zeschuk were given the Order of Canada in recognition of their extraordinary contributions to the nation. The award is presented by Canada's government to Canadians who have made a lasting impact in a wide array of fields from arts and sciences to leadership and public service.





## BIOWARE IN 2148

WITH 25 YEARS DOWN, BIOWARE LOOKS TO THE NEXT 128

A COUPLE OF MONTHS after moving into EPCOR Tower, finishing touches like paint and stairs were still being completed at BioWare Edmonton's new studio. The dev teams didn't seem to mind as they found their bearings and hammer away at new projects.

"We can't go back to where we've been," Casey Hudson says, now the studio's general manager. Casey left BioWare for a three-year stint at Microsoft during *Anthem's* development, returning in 2017 to succeed Aaryn Flynn as studio head.

"The way that we worked, all of those stories and the crunch and eating pizza for six weeks straight and all that kind of stuff, as fun and memorable as

it was at the time, those things won't work for where we're going," Casey says.

As BioWare grows, Casey says it must learn better ways to work while still embodying the values laid out by Drs. Ray Muzyka and Greg Zeschuk.

"It starts with the ones that were there at the very beginning with Greg and Ray of humility and integrity," he says. "Those are super important."

Other pillars include a passion for excellence and courageous creativity.

"We used to exemplify this not because we were courageous, but because we didn't know better. We would try things and fail and try something else until we got it right, and it was very experimental. But what can happen is, once you do know the consequences of failure, you can very easily start retreating. And at that point, it actually does take courage to put yourself out there and try something new," Casey says. "We're not super young and inexperienced anymore. We do know better, but we still have to try and do some crazy stuff anyway."

I am excited to what the future holds. I think BioWare is changing. I think we're itches and where we can't accept that and move into the new BioWare, or we can try to cling to the past. We have to be respectful of our origins without being constrained by them. It's an exciting time and I'm really looking forward to what the next five years brings. —Ray Muzyka, who began at BioWare as a QA firm, then the new *Dragon Age* narrative director. I'm one of the people who's probably going to be around until they have to literally throw me out of the building. I love working here and love the people I work with and I've been here since I came into work every day. —Greg Zeschuk, BioWare's chief creative officer.





## TEVINTER BOUND

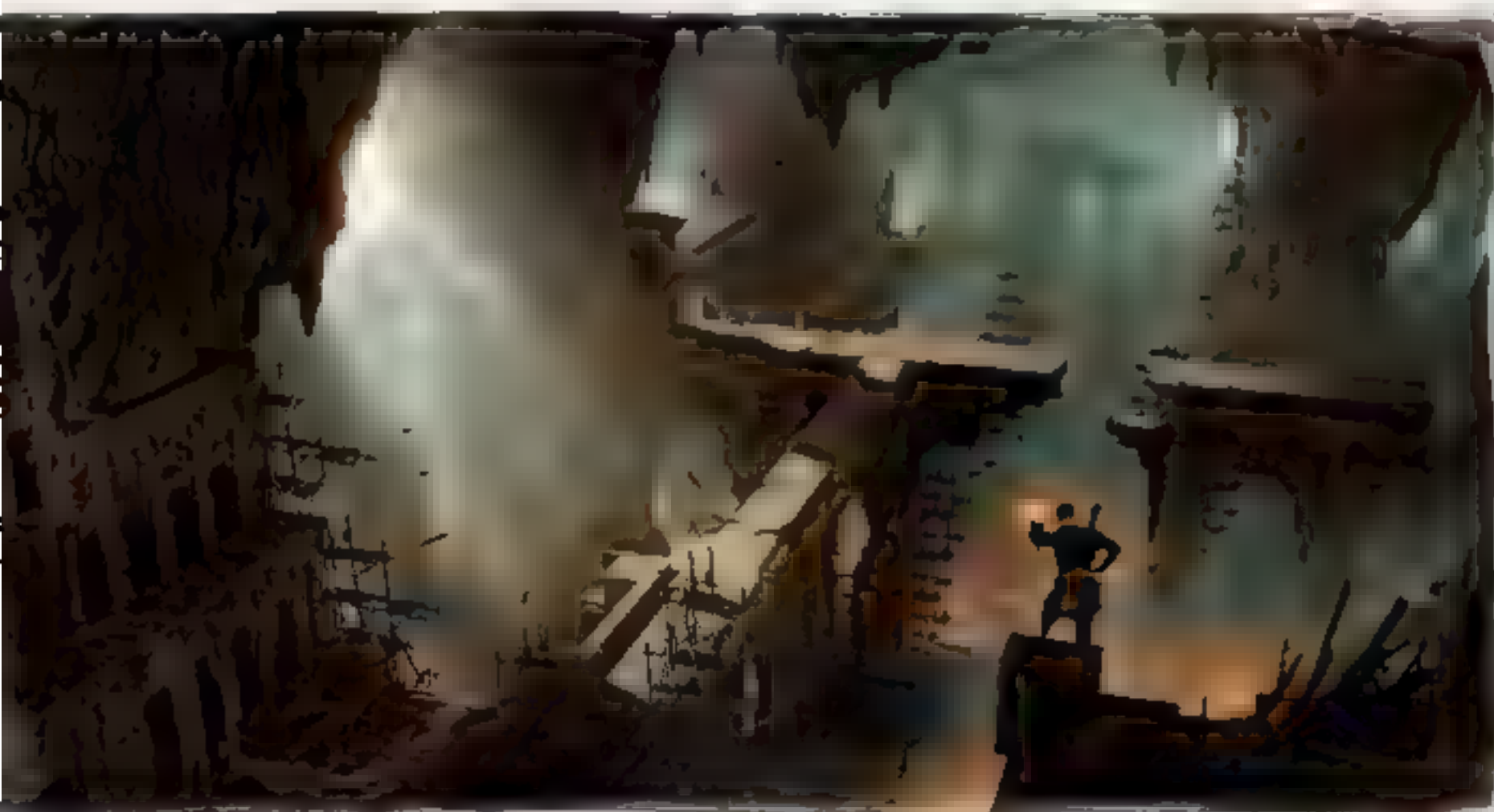
A SNEAK PEEK AT THE  
FOLLOW-UP TO *INQUISITION*

AS BIOWARE ENTERED its twenty-fifth year, the *Dragon Age* team was hard at work on Morrison, the code name of the long-awaited follow-up to *Dragon Age: Inquisition*. The game, helmed by executive producer Mark Darrah, will take players to Tevinter as the events of *Inquisition* and *Trespasser* threaten to forever change Thedas.

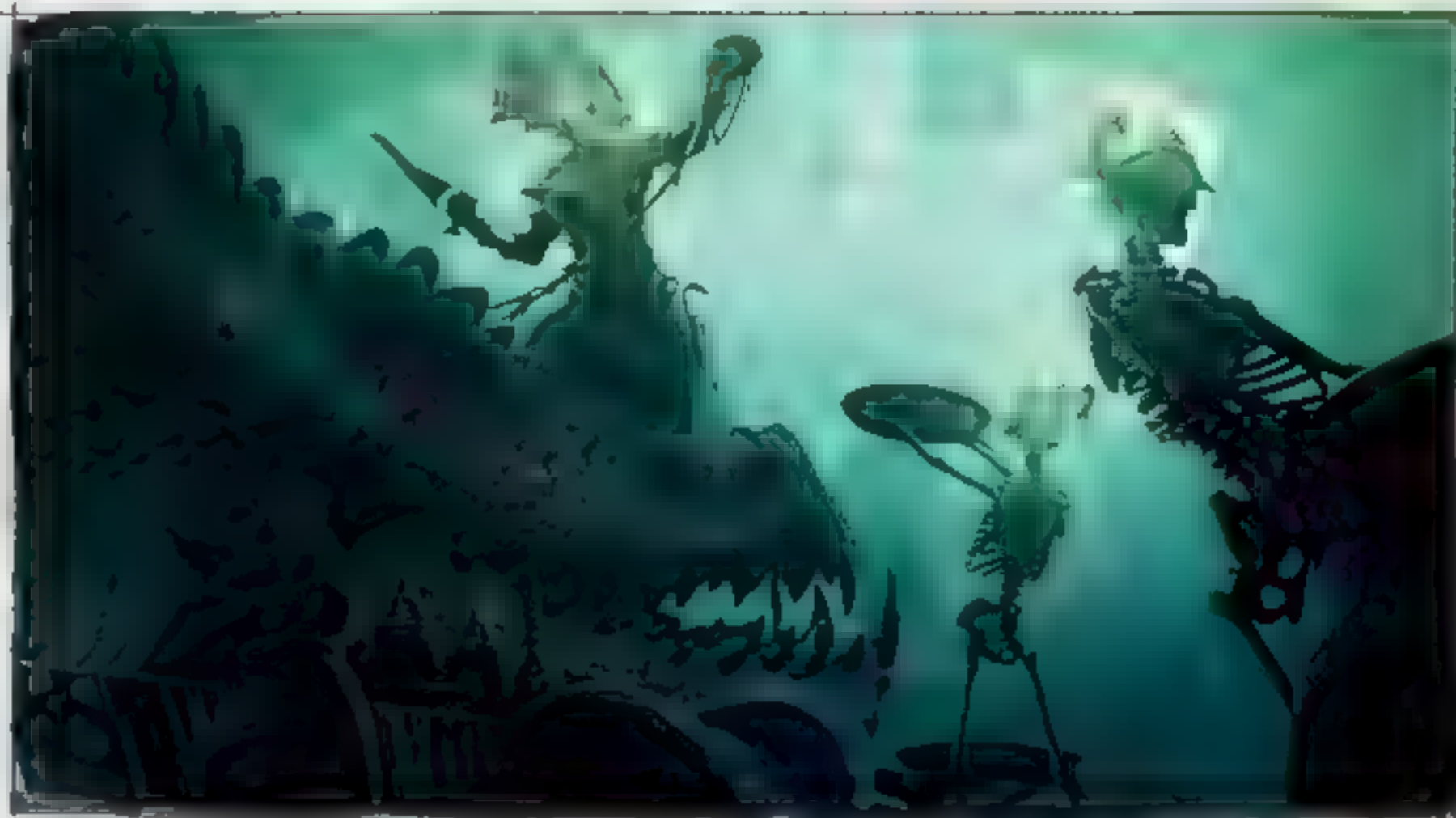
# DRAGON AGE MORRISON



The Evil Gods have Thedas in their sights and only heroes can stop them. The shadows of the past stir, and new heroes must rise to fight them.

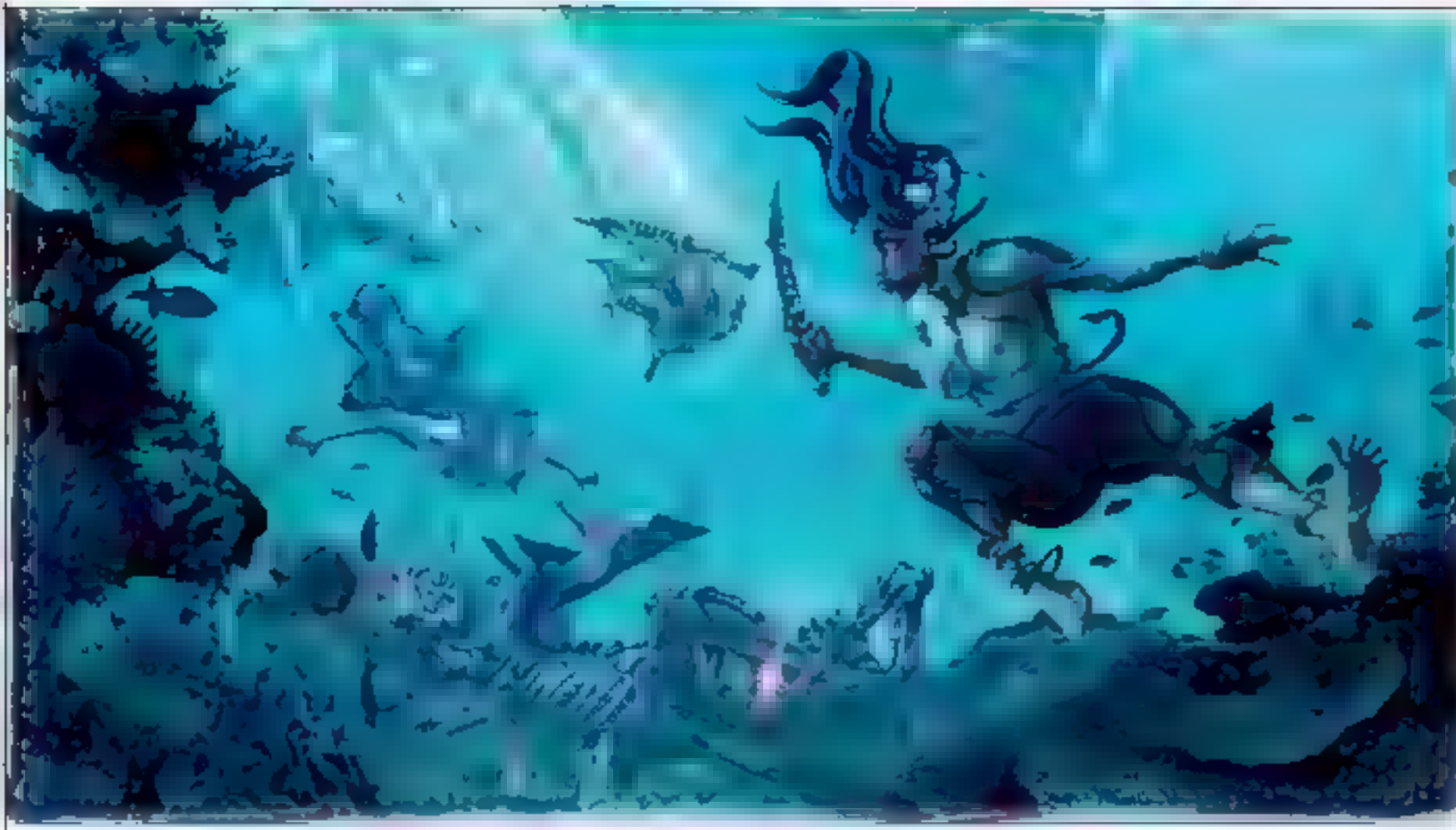


The Deep Roads teem with evils both new and old, known and unknowable.



From their Necropolis, the Mourn Watch guard Thedas from occult threats.





Where there's treasure, there's adventurers braving death to get it. The Lords of Fortune are always on the hunt for treasure—wherever it might be.



The glittering hubs of Thedas are beacons of civilization and bulwarks against the night.



The Antivan Crows have perfected theatrical assassinations. The Antivan Crows are celebrated for their mastery of stylish slaying.



One of Nick Thornborrow's beautiful paintings showing an old friend with a shadowy threat!



One perk of the job is a steady supply of themed T-shirts!



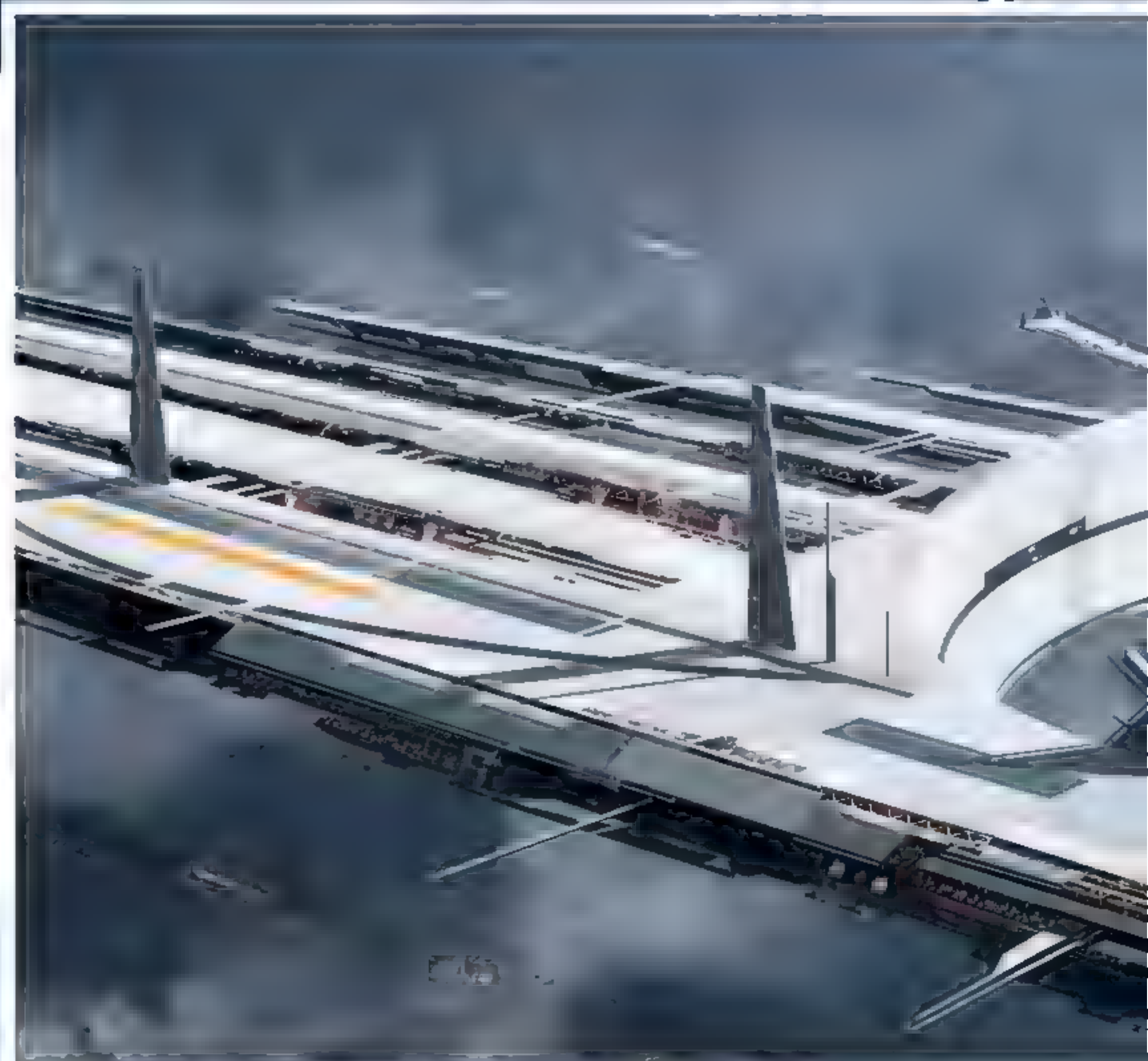


## BACK TO SPACE

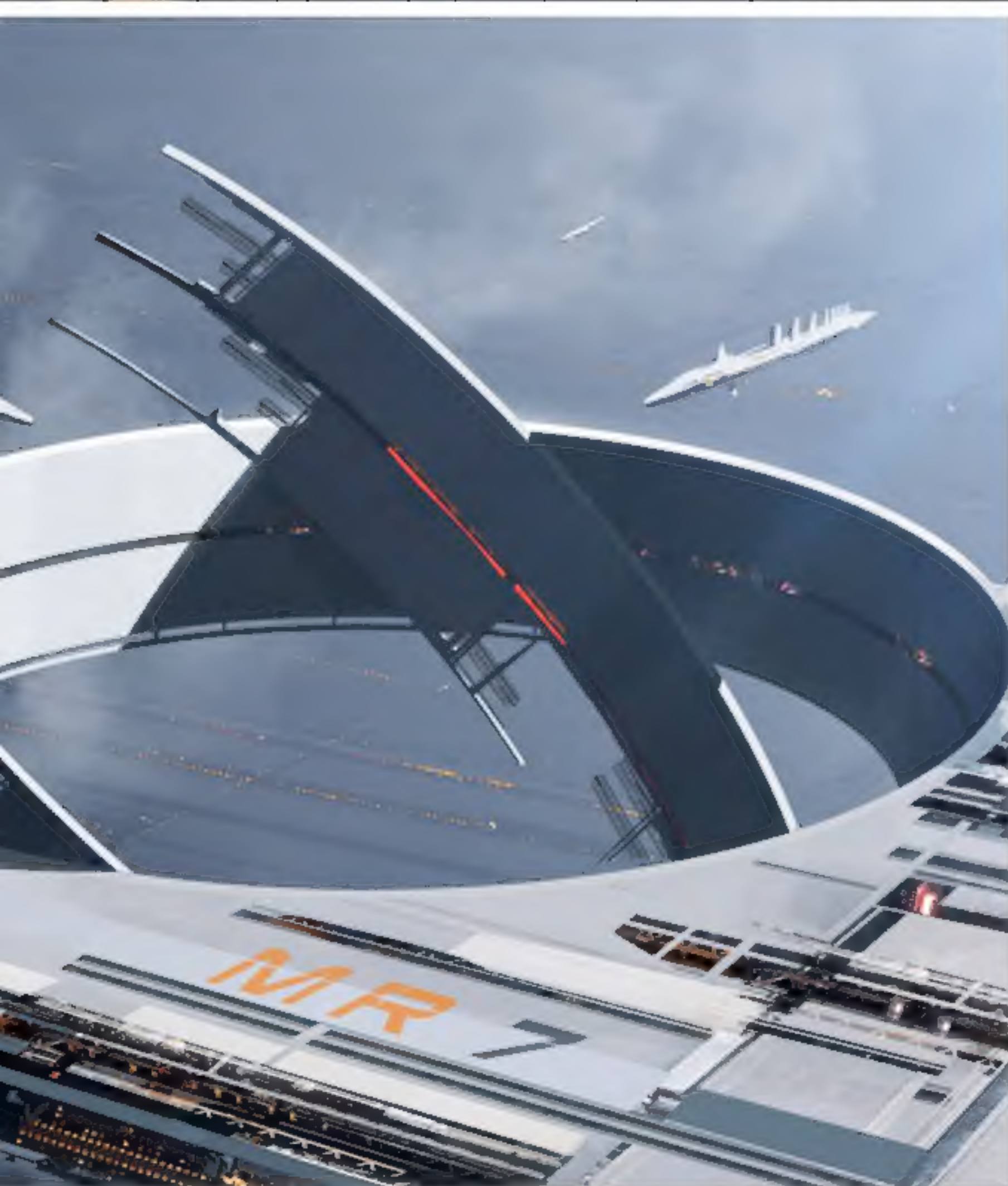
A LOOK AT THE NEXT *MASS EFFECT*

**ON THE HEELS OF** a long-awaited remaster of the *Mass Effect* trilogy, BioWare now prepares its epic return to space. A veteran team is hard at work envisioning the next big *Mass Effect* game. Expect amazing new worlds to explore with memorable characters buoyed by the series' signature choices and consequences.

"There's an incredible universe of history to draw from, and many more stories for us to tell," project director Mike Gamble says. "We're focusing on creating something truly for the fans."











## ABOUT THE AUTHOR

**BEN GELINAS** is a writer, editor, and game developer. He was an editor at BioWare for six years on games including *Mass Effect 3*, *Mass Effect: Andromeda*, and *Dragon Age: Inquisition* before leaving to create the indie studio Copychaser Games. He has since released his first game, *Speed Dating for Ghosts*. He was a writer on Remedy Entertainment's award-winning 2019 title *Control*.

Ben also wrote large portions of *Dragon Age: The World of Thedas Volume 1*, *Dragon Age: The World of Thedas Volume 2*, and the English version of *The Legend of Zelda Encyclopedia*, all published by Dark Horse Books.

Before his video game career, Ben was a crime reporter and blogger at the *Edmonton Journal*.

Ben (@bengelinas) lives in Calgary with his partner Madeline and his dog Gary. He can often be found at garage sales searching for Super Nintendo games to complete his collection.

The photo above is an outtake from a 2015 series of BioWare Edmonton developer portraits taken by then-new media production coordinator Sean Trayner.











## “CREATING WORLDS OF ADVENTURE, CONFLICT, AND COMPANIONSHIP THAT INSPIRE YOU TO BECOME THE HERO OF YOUR STORY.” —BIOWARE’S MISSION

From BioWare’s isometric role-playing roots to its beloved space operas and sweeping high fantasies, *BioWare: Stories and Secrets from 25 Years of Game Development* collects a quarter century of memories and milestones from the legendary video game studio.

These pages will put you in the room during key moments in BioWare’s history, with never-before-seen art, photos, and design documents anchored by candid stories from developers past and present. See what it took to make games in those wild early days. Pore over details of secret canceled projects. Discover the genesis of beloved characters and games.

Written and collected by BioWare veterans, this massive retrospective is a tribute to the celebrated studio’s legacy and a must-have for any fan of the best stories you can play.

**BioWare**

